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EDITORIAL.

ON the 16th of November last, the House of Representatives adopted a resolution requesting the heads of the Executive Departments of the Government to report any objections which might exist to making the use of the metric system of weights and measures obligatory in all governmental transactions. The Postmaster General reported that the expense of making the change and the general lack of knowledge regarding the system were the principal objections, and recommended that at least six months should be allowed before its use should become obligatory. The Secretary of the Navy saw no objection, excepting that, if applied to soundings, it would necessitate a total loss of all charts and chart plates now in use, and would interfere with their exchange with England. The War Department admitted that the exchange is practicable, but the Engineer corps will require five years to prepare for it; while the Ordnance corps can be ready in one year. Quartermaster-General Meigs will require only time enough to issue necessary circulars.

On the 25th of January, Representative Maish introduced a bill providing that on and after Jan. 1st, 1879, for all postal purposes, 15 grammes shall be substituted for half an ounce, and so on, in proportion; that the Postmaster-General shall furnish all post offices with postal balances, denominated in grammes of the metric system, and that on and after January 1st, 1880, the metric system of weights and measures, as legalized in section 3,569 of the Revised Statues, shall be obligatory.

Mr. Maish also introduced a bill to establish the metric system in the coinage of the United States, and to provide for and regulate the coinage, including the new coin metal called "goloid," compounded and finished on the principle invented and patented by W. W. Hubbell.

THE French Committee on Public Health, attached to the department of the Minister of Agriculture and Commerce, have had under consideration the existing laws in relation to the admission into France of foreign pharmaceutical preparations, and have, as a result, reported in favor of less stringent conditions. In explaining the present law, the *Pharm. Jour. and Trans.* says: "The importation of all medical preparations, except distilled waters and extract of cinchona bark, is prohibited unless certain formalities are gone through with the object of obtaining admission. For this purpose it is necessary that the preparations in question should be recognized by the Ecole de Pharmacie as being "necessary or useful," and then they are passed by the Customs only on payment of a duty of twenty per cent."

Among the arguments brought forward are the following: 1. That the present restrictions savor too much of "protection principles." 2. That there is a demand for French preparations in countries where there are no such restrictions. 3. That reciprocity seems desirable in order to secure for French manufacturers a market in countries which impose similar regulations while the present laws are enforced by France. 4. That in order to be "necessary and useful," it is not indispensable that a preparation should possess new therapeutic properties, since a modification of the form of a preparation which renders it more easy to administer would bring it within the definition of the act. 5. That the official formulæ of different countries may vary from the French Codex, and still the remedies prepared according to them may be valuable, etc., etc.

In pursuance of these views the Committee have submitted to the Government the following suggestions:

1. That the restrictions imposed by the law of 1817 should not apply to compound medicines, the importation of which is demanded by a pharmacist, and that these medicines should be admissible subject to a duty of ten per cent *ad valorem;* the value to be determined by the Ecole Supérieure de Pharmacie.

2. That the sale of foreign compound medicines admitted into France should be subject to the same regulations as the sale of similar products of French manufacture.

Acting upon these recommendations, the

Minister of Agriculture and Commerce has, in the draft of a bill presented by him last year to the French chamber in relation to the customs, proposed to allow the importation of such foreign pharmaceutical preparations as are comprised in the official pharmacopœias of other countries, subject to a duty of ten per cent, independently of a further compensatory duty in the case of medicines prepared with material subject to customs or excise duty. As regards preparations that are not comprised in official pharmacopœias, however, it is still proposed to maintain the existing prohibitory restrictions. This bill was not discussed by the legislature during the late session, but it is likely to be soon brought forward.

REPRESENTATIVE Fernando Wood, Chairman of the Congressional Committee on Ways and Means, has in preparation a most remarkable tariff bill, which it is expected will soon be brought before Congress for adoption. The proposed changes in the tariff in chemical and pharmaceutical preparations have been made public, and are both considerable and important, a tax being imposed on many raw materials and removed or diminished on manufactured goods. The manufacturing chemists have gone early to work, and the Committee will be allowed no excuse of ignorance regarding the requirements or interests of the trade involved.

THE commencement of the year always brings a considerable addition to the list of journals published for the benefit of the medical and pharmaceutical professions. Detroit, which seems to be the favorite place for ventures of this sort, has now, as the latest contribution, the *Michigan Medical News*, a semi-monthly journal, devoted to practical medicine, of 12 pages at $1.00 per annum. The usual amount of "soft sawder" characterizes its prospectus, and the well-worn announcement is made that it gives more for the money than any other journal published. Most of its items are rather antiquated, and many of them have already been published by us; but this may be corrected when it gets its exchanges arranged. Eight editors, living in as many different localities, adorn with their names its title page, but J. J. Mulheron, M.D., of Detroit (formerly of the *Detroit Medical Journal*), is the managing editor.

The Detroit Medical Journal appears, in fact, to have gone to pieces; the other editor, Laertes Connor, M.D., having joined H. A. Clelland, M.D., in starting the *The Detroit Lancet*, which is to be conducted "in as liberal a manner as is consistent with our means and the support we receive"—a very judicious prospectus which we are quite sure the proprietors will not regret having uttered. In view of the previous extinguishment of other Detroit journals, and the establishment of Dr. Leonard's "*New Preparations*," together with the facts above chronicled, we would like to suggest that "*The Detroit Kaleidoscope*," would be rather expressive as a title for the next combination.

The *North Carolina Medical Journal*, of which M. J. De Rosset, M.D., of this city, and Thomas F. Wood, M.D., are editors, is to be published monthly at Wilmington, N. C., and furnished to subscribers for $3.00 per annum. It is a handsome octavo of 68 pages, is ably edited, and deserves to be well supported.

The Glasgow Medical Journal, which has heretofore appeared at quarterly intervals, has taken in new life, and is to be issued in monthly parts, with Joseph Coats, M.D., as editor. The number of pages in the year will remain the same, but considerable changes are promised in the nature of the matter published. We wish it success.

L'Homœopathie Militante is the somewhat "bumptious" title of the new organ of the Belgian Homœopathic Medical Society, which threatens to make things warm for the "old school." We cannot discover from the number which has been forwarded to us by Dr. A. Dekeersmaecker (whom we presume to be the editor) how often the attack is to be renewed, but the journal has the physiognomy of a monthly. May the best man win!

The *Philadelphia Druggist and Chemist* has been started to "meet a want" in its neighborhood not filled by the *Amer. Journ. of Pharmacy*. The field is rather limited—and so is the amount of matter furnished—but the editor declares that there is trouble brewing between the doctors and pharmacists, and that he has set himself to work as a "connecting link." We had quite a different opinion regarding the condition of affairs in the "City of Brotherly Love," and we hope that our editorial friend is mistaken in his estimate of the importance of the "hard words" which he declares have been spoken on both sides. It is rather remarkable that it should ha e been thought necessary to start a special journal for such a purpose, and we have looked with care for some statement of the cause of the trouble, or of the present attitude of the conflicting parties; but we fail to find anything beyond the editorial announcement that "agencies are at work, etc., etc.," and that "the prospects are that, unless care is used, an open rupture will occur between the two."

Especial thanks are rendered to six of the seventeen advertisers in this first number, which leads us to wonder whether it was for payment in advance? "Blessed are the peace-makers," etc., is an encouraging promise, but we have some doubts if the business will be an eminent success as a commercial venture.

The Druggists' Circular is by no means a recent venture, having passed its majority, and arrived at a period in its career when (to use a nautical way of putting it) it may be presumed to have got beyond the sand-bars and breakers

which skirt the sea of commercial life, and to have laid its course and trimmed its sails for a long tack of prosperity. Stories are told about ships having been met at sea, on board of which all hands had apparently gone to sleep during the monotony of one of these unvarying courses, but we can hardly say this of our convoy. However, there was some remarkably lively scrambling on deck soon after NEW REMEDIES, with her new rig, hove in sight. Among the most prominent indications of recognition was the reduction of the rate of passage by our rival line, from $1.60 to $1.00; but this was, no doubt, owing to the confusion of the moment, for on the next trip the old price and the discipline of the crew appear to have been restored. The apparition must, however, have produced a serious effect of some sort, for, although we have been sailing along within signalling distance of each other, it would not be supposed from a cursory glance over the decks of the *Circular* that NEW REMEDIES had ever been sighted since Jan., 1876. A little closer observation, however, will discover a general "sprucing up," which indicates greater attention to what is going on in the direction of the horizon. The *Circular* does pretty well on some trips as regards cargo (although we do not altogether approve of the Arts and Sciences and General Business deck-load). To drop the simile, we will conclude by saying that we recognize the fact that there must be a considerable number of "old subscribers" whose sympathies would hardly allow them to let their subscriptions lapse, and for their encouragement we will say that, until we increase the number of our pages, there will always be something left each month that we cannot make room for. We sent our contemporary a galley of matter last month which we could not use just then, and which added considerably to the local interest of its columns. We give the present notice on the strength of the last change which we observe, namely, the rearrangement of the table of contents, so that it, together with the business heading, occupies the whole of the first column. The plan appears to be a good one, and we will try it this month ourselves, with some differences, and we shall require three columns instead of one column, which we shall take out of the advertising space, instead of the body of the journal.

The St. Louis Medical and Surgical Journal, with the commencement of its XXXIV. volume, goes into the editorial hands of Drs. Thos. F. Rumbold, Editor and Proprietor, and Hiram Christopher, Associate Editor. It has also assumed a new dress, which makes considerable improvement in its appearance.

Inferior Fluid Extract of Veratrum Viride.—The editor of the *Pacific Med. and Surg. Journal* recommends veratrum viride as a remedy for priapism, but says in this connection that he recently found that a sample of the fluid extract prepared by a reputable Eastern house was absolutely inert for this purpose.

MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

NOTE ON HYDROBROMIC ACID.*

By EDWARD R. SQUIBB, M.D.

AMONG the recent additions to the materia medica, hydrobromic acid seems likely to take a permanent place if some method of preparation and some standard of strength can be adopted whereby a moderate degree of precision in its use might be attained.

Various modes of preparation have supplied the market up to the present time with acid of various, and commonly unknown strengths; and generally not pure enough for medical uses. And the various arbitrary doses published with the various acids as sold seem to bear no proper relation to its strength or to its therapeutic power as compared with the bromides for which it is used as a substitute.

Hence, as might reasonably be expected, the experience and testimony, in regard to its utility, are confused and often conflicting, and this apparently without any suspicion that the confusion and failures might depend on the quality and strength of the acid used.

Physicians prescribe such articles, and pharmacists buy and dispense them, too often as if there could be but one thing supplied. For example, the physician prescribes hydrobromic acid in half-drachm doses. The pharmacist goes to the manufacturer, or to the importing house, and buys it to dispense, and too often neither of them know that it may be of any strength from one to fifty per cent. And, when the percentage strength is known, few will calculate what should be the dose equivalent to the bromide for which it is to be substituted, or appropriate to the bromine effect that is desired.

It is true that the dose cannot be determined by the quantity of bromine present in the acid as compared with that present in the bromides, no more than the dose of chlorine could be determined by the quantity present in the chlorides, or of cyanogen by the quantity present in the cyanides: yet there is doubtless some relation, and this relation, when studied, is the best basis for the accumulation of facts and experience.

The acid is a sedative neurotic, and its principal uses as developed up to this time are as an occasional substitute or alternate for the bromides of potassium, sodium, and ammonium. It is well established that the bromine is the active medicinal agent, whose influence is sought in the use of these salts. And it is also well known that the alkaline bases,—and especially potassium,—when given for a long time, are liable to

*A paper presented at the Annual Meeting of the Medical Society of the State of New York, on the 16th of January, 1878.

enfeeble the muscular tissues; and produce other changes not desirable, through undue alkalinity of the blood and the secretions; and, through the secretions to enfeeble the digestive and assimilative processes. It is true that the proportion of cases in which such effects come into undue prominence is small, but to correct them where they do occur, and to forestall them when likely to occur, without suspending the bromine, whose continuous sedative action is often very important,—this acid now comes into use.

It is, however, certainly not well adapted to very prolonged use, for, like other so-called mineral acids, it would be very liable to interfere more with the normal processes of the economy than the bromine salts with alkaline bases. Therefore, for the present at least, it must be regarded simply as an alternate for the bromides, for occasional and exceptional, rather than for general use. Such uses are, however, very important in the treatment of chronic affections of the nervous system, even when neither functional nor organic mischief is observed or apprehended, for several reasons, among which the disgust which patients often acquire for salines when long continued, is not the least. In hospitals for the insane, especially in the epileptic wards, it should be very useful, both in effect and in facility of administration, because it can be given in the form of lemonade, if moderate or small doses should prove effective.

It has been highly spoken of as a corrective and preventive remedy for the headache, ringing of the ears, and general cerebral distress which often follows upon the use of salts of quinia—which should be called quinism and not cinchonism. When given with or after the salts of quinia, the disagreeable head symptoms are said to be prevented. It should be remembered, however, that, as a general rule, some degree of this quinism is necessary to indicate the full power of quinia salts, and that irrespective of the quantity given, the full influence as an antiperiodic is never assured without some degree of the head symptoms; and that the dose required to produce the full antiperiodic effect varies very much in different individuals, and even in the same individual at different times. In those cases where small quantities of any of the salts of quinia produce head symtoms of disproportionate severity, so that the desired benefit of the antiperiodic cannot be attained because the sufficient dose cannot be borne, this acid is said to be very useful, either given with the quinia salt, or later, when the head symptoms begin. It is also said to be useful in nervous headaches and tinnitus from other causes than the administration of quinia salts, and to be effective when given at any stage of the affection.

Other uses to which the acid has been applied with alleged advantage are not yet confirmed.

The first necessity in the application of a new remedy is to know its relations of quantity and effect upon the economy, and this starting point being generally difficult to obtain, many valuable agents are lost, while others blunder into use through confusion and difficulty, or become a prey to empiricism. Thus the beneficent effects of potassium bromide as a sedative neurotic failed of full recognition for more than twenty years, through the inadequate quantities directed as doses by standard authorities; and it was only where the so-called toxic doses were exceeded that its utility in a large class of cases was realized.

It being now generally established that it is the bromine element which is effective in all the bromides, the base merely giving direction to the sedative action and to the rate of elimination, the doses required for a given effect are approximately proportionate to the quantity of bromine present in the different bromides. Potassium bromide contains 67.22 per cent of bromine; sodium bromide, 71.4 per cent;* and ammonium bromide, 81.6 per cent, and therefore their doses, to be equivalent in bromine, are nearly in the ratio of 9, 8, and 7½. That is, 20 grains of potassium bromide is equal to a dose of 18.8 of the sodium salt, or 16.5 grains of the ammonium salt, the quantity of bromine being constant in all three at about 13.44 grains. But such a quantity as 13.44 grains of uncombined bromine put into the stomach would probably be a fatal poison.

Hydrobromic acid—which is really hydrogen bromide, or bromide of hydrogen—is a gaseous substance, containing 98.76 per cent of bromine. But the solution of the gas in water, which constitutes the liquid commonly known as hydrobromic acid, may contain the gas in any proportion, or be of any strength, and when stronger than about 40 per cent, it is corrosive and inconvenient for any ordinary uses.

The potassium salt is, of all the bromides, the most commonly used, and its doses to obtain given effects are best established. Hence, if this salt be used as a standard for hydrobromic acid as it is for other bromides, and the acid be adjusted in strength so as to bear some easily remembered relation of its bromine constituent to the potassium salt, a base or starting point would be established for its general and accurate use, whether the bromine when combined with hydrogen should prove more active than when combined with potassium or not. Then, as the potassium salt contains, in round numbers, say 68 per cent of bromine, a solution of hydrobromic acid containing also 68 per cent of bromine would have the same bromine value, though not necessarily the same bromine effect in medicine. But an acid of this strength would be unneces-

* The sodium bromide of the market seems to be neither the anhydrous salt, containing 77 7 per cent of bromine, nor that with four equivalents of water, containing 57.55 per cent, but a mixture of the two, containing about 9 per cent of water, and therefore containing about 71.4 per cent of bromine, as above stated.

sarily difficult to make and to dispense. The next most simple relation is to have an acid of half the bromine strength of the salt, or 34 per cent. Such a strength can be made, kept, and dispensed without unusual difficulty, and represents the bromine of the potassium bromide in the proportion of about 2 to 1, a relation easily remembered and convenient in use. Therefore this strength has been adopted as a proper and convenient one, and the quantity of such an acid equal to the bromine of 20 grains of potassium bromide would be 40 grains, though the equivalent dose might be smaller to produce a given effect, should bromine when combined with hydrogen prove more active than when combined with potassium.

The formula and process for making an acid of this strength are as follows:

Take of potassium bromide	Six parts.
Sulphuric acid, s. g. at 15.6° C. = 60° F. 1.838, at 25° C. = 77° F. 1.828	Seven "
Water	Nine "

Add to the sulphuric acid one part of the water and cool the mixture. Then dissolve the potassium bromide in six parts of the water by means of heat, supplying the loss of water by evaporation during the heating. Pour the diluted sulphuric acid into the hot solution with constant stirring, and set the mixture aside for 24 hours, that the sulphate of potassium may crystallize. Pour off the liquid into a retort, break up the crystalline mass, transfer it to a funnel, and having drained the crystals, drop slowly upon them two parts of the water, so as to displace and wash out the acid liquid. Add the liquid thus drained off and washed out to that in the retort, and distil the whole nearly to dryness, or until nothing further distils off by moderate heating. The distillate will weigh about ten parts, and should contain about 37 per cent of hydrobromic acid. Assay this by means of normal volumetric solution of sodium, and add distilled water until it shall have the strength of 34 per cent of hydrobromic acid. The product will weigh about eleven parts, and the loss of hydrobromic acid, as calculated from the potassium bromide, will be about 1.2 per cent.

Solution of hydrobromic acid thus prepared is a limpid, colorless, odorless liquid, having a strongly acid taste. At 15.6°C.=60°F. it has a s. g. of 1.274. At 25°C.=77°F. the s. g. is 1.257, both compared with water at 15.6°C.=60°F. It is free from sulphuric acid, or gives but an unimportant trace when tested with solution of baric chloride; and is free from sulphurous acid when tested by its action on pure zinc, yielding a gas which does not blacken paper moistened with solution of plumbic acetate. It leaves on evaporation no residue, or but an accidental trace.

It consists of about 33.4 per cent of bromine, about 0.6 per cent of hydrogen, and 66 per cent of water; or, of 34 per cent of hydrobromic acid, HBr=81 and 66 per cent of water. Its formula is (H=1+Br=80=) HBr=81+Aq.

In making this acid on a scale suited to the physician or pharmacist, each part in the formula may be represented by 28.35 gram.=1 ounce avoirdupois, and the process answers very well upon this scale, yielding about 360 gram.= 12.47 ounces.

Tared beakers—a retort about double the capacity of the liquid, with a strip of wire cloth around it where the heating flame is applied, and a small Liebig's condenser—are necessary for this process, and in the distillation here—as indeed everywhere—the lamp flame should be applied to the side of the retort.

If the mixture of sulphuric acid and water be not cooled, it causes spattering and loss when poured into the hot solution of the bromide. In dissolving the bromide in an equal weight of water by heating, there is loss of water by evaporation, and unless this loss be made up, it will not be practicable to get a perfect solution. But an entirely perfect solution is not essential, provided the undissolved portion be in a finely divided state, for when the diluted sulphuric acid is poured slowly in with stirring, any small proportion of the bromide will be dissolved by the additional amount of liquid and by the stirring. After standing 24 hours, the lower part of the vessel will be occupied by a mass of crystals of large size, easily broken up to drain and wash. The quantity of sulphuric acid taken for the process appears disproportionate, being in excess of the quantity necessary to form acid potassium sulphate; but unless such excess be taken, the salt will not crystallize out as completely, and then the distillation will be defeated when only about half finished by bumping in the retort. Smaller proportions of acid were successively tried, and when bumping occurred the process was stopped, and the contents of the retort were turned out, cooled, and the crystals separated, drained and washed, but this is troublesome and entirely unnecessary if the larger proportion of acid be used, for then almost the whole of the salt crystallizes out, rendering the process easy, when it would be otherwise either troublesome or entirely impracticable. Near the close of the distillation the heat must be kept moderate, because, if increased much, sulphuric and sulphurous acids are liable to be distilled over in considerable quantities. The minute quantities of both which do go over, even in a well-managed distillation, are probably thrown over mechanically by the bursting of bubbles on the surface of the boiling liquid. The quantity of either in the distillate of a well-managed distillation is but a trace, and so small as to be unimportant. But should it be desired to have the distillate entirely free from these acids, a very small quantity of barium hydrate must be added and the whole be redistilled. In the distillation the hydrobromic acid comes over comparatively weak at first, the strength gradually increasing to about 47 per cent, hence the distillate should be well stirred before being tested or assayed.

In testing for sulphurous acid it is only necessary to put a small piece of pure zinc into a test tube, pour upon it a few drops of the acid, push into the upper part a loose wad of cotton wool, and lay the paper moistened with solution of plumbic acetate on to the cotton wool.

The assays and adjustment of strength are conveniently and easily made as follows: The atomic weight of HBr being 81, a half of the tenth part of this number, namely 4.05 gram., is weighed off, and normal sodium solution is dropped into it from a burette to the point of saturation, as ascertained by means of a small piece of litmus paper kept floating in the acid, as it is stirred during the dropping in of the volumetric sodium solution. Usually 18 to 19 cc. of the volumetric solution is required for saturation. Then, as only half of 8.1 gram. was taken for the assay, this reading from the burette must be doubled, and therefore indicates 36 to 38 per cent as the strength. Then weigh the distillate again, and add to it 5 per cent of its weight of distilled water and again assay it as before. By calculation from the quantity of water used to reduce it to this new strength, the additional quantity of water necessary to reduce it to the 34 per cent required is easily found. When this shall have been added, and the whole well stirred, a final assay should be made to verify the result.

This acid, in common with all the others, should be dispensed by weight. A troy ounce of it contains almost exactly 400 minims (401.48+), and the fluidounce, of 480 minims, weighs almost exactly 574 grains (573.86+). A drachm of it, therefore, would contain 50 minims, and would be the bromine equivalent of 30 grains of potassium bromide. A gram. of the acid is equal to 12.86 minims, and therefore 4 gram. would be 51.44 minims equal to 30.86 grains of the potassium bromide, a very large sedative dose.

The acid is not very easily administered in full doses in consequence of the large dilution necessary, and the disagreeable effect of "setting the teeth on edge." A dose of 50 grains, equal to 41.66 minims, and to 25 grains of potassium bromide, requires not less than 8 fluidounces of dilution. And the dilution must contain not less than an ounce of sugar, or two ounces of syrup to make it easily drinkable. This will be found to be the principal drawback to the use of the acid unless it shall be proved to be effective in smaller quantities than its equivalence to the bromides indicates. And this effectiveness in much smaller doses is not only probable, but almost certain if the experience of Fothergill and others may be trusted, since they give it in doses of one-eighth to one-fourth of those here indicated as being the bromine equivalent of potassium bromide. That is to say, the doses advised by those who appear to have used it with the best effects are equivalent to about 6 to 8 grains of potassium bromide. This published experience would make the average dose of the acid here described, say about 12 to 16 grains, or the bromine equivalent of only 6 to 8 grains of potassium bromide. In the very limited experience of physicians around the writer these doses are too small, and 20 to 30 grains, equal to 10 to 15 grains of potassium bromide, are needed for a prompt sedative effect, while 40 to 50 grain doses are not uncommon. And such doses have to be repeated at times in controlling the headache, etc., of quinism. Even such doses require a dilution of two to four fluidounces of water for easy administration.

If 60 grains=50 minims of the acid here described be added to 1,140 grains of syrup, the mixture will measure two fluidounces and weigh (60+1140=) 1,200 grains. Each 75 grains of this, 1 fluidrachm, will contain 4 grains nearly, or a little more than 3 minims of the acid. And 4 fluidrachms of this, equal to 15 grains of the acid, when diluted with ice water to 2 to 4 fluidounces, make a dose which is easily administered and probably effective. Such a dose is equal to 12.5 grains of potassium bromide.

Beside the administration of single doses for temporary sedative effect, it will, however, doubtless come into occasional use for a more prolonged and permanent effect, as a partial substitute or alternate for the bromides, to correct or prevent alkaline saturation. The doses for such continuous uses do not seem to have been ascertained, for no instance of bromism from its use has been published so far as this writer has seen. Therefore, as bromism must be the test of effective quantity, the doses must be considered as unsettled. If the bromine, as present in this acid, should prove capable of producing bromism in much smaller quantity than that present in the bromides, as seems to be foreshadowed in its use up to this time, then an important advantage will have been gained, and the doses of the acid will be correspondingly smaller. At present it appears that for continuous use as a substitute for the bromides, to be continued through several weeks, or until the bromides can be resumed, doses of 20 to 30 grains might be sufficient. It may also be found that, by adding smaller quantities of the acid to reduced doses of the bromides, the alkaline saturation might be postponed or avoided. For example, where an epileptic may be taking 25 grains of potassium bromide three or four times a day, it may, and probably will be found that the dose of bromide can be reduced to 20 grains or less by adding one, two, or three grains of this acid to the smaller dose. Such uses as this for the acid are well worth careful trial, and in such quantities it can be easily administered.

The acid will also undoubtedly prove very useful for making solutions of various bromides extemporaneously. For example, lithium bromide should, by its composition, be very useful in medicine, as the salt contains nearly 90 per cent of bromine, or more bromine and less base

than any other neutral salt possible. This is easily made simply by saturating the acid with lithium carbonate, and adjusting the volume of the solution to the dose required.

Many formulas have been published for making this acid for medicinal uses, but all so faulty and inaccurate, or so difficult as to be impracticable for ordinary use where any moderate degree of precision in medication is required.

That of Fothergill was among the earliest, and has been by far the most used. It is given in his "Handbook of Treatment," Amer. edition of 1877, p. 569. The formula is loose and inaccurate, containing a considerable excess (161 grains) of potassium bromide. Its quantitative defects are easily remedied, but it yields a complex solution containing much tartaric acid and potassium, and is otherwise objectionable, having all the faults of the process upon which it is modelled, namely, the process for hydriodic acid by Buchanan, of Glasgow. Made by Fothergill's formula it will commonly contain between 8 and 9 per cent of the hydrobromic acid, and as the dose is stated at "℥ ss. to ℥ i.," if this be by weight as it is written, it will be equivalent to 4 to 8 grains of potassium bromide only.

Fothergill's process was very much improved by Mr. Charles Rice; see NEW REMEDIES for April 16th, 1877, p. 107. But this preparation, though much more definite, is still liable to the objection of containing much tartaric acid and potassium, and therefore of being difficult to identify or verify, or to discriminate by tests or by assay.

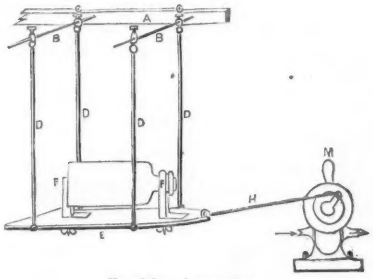
Much better results are obtained by the original process of Balard, particularly as modified by Prof. J. M. Maisch. See Proceedings of The Amer. Pharm. Asso. for 1860, p. 220, or as still farther modified by Prof. G. F. H. Markoe, see Proceedings of The Amer. Pharm. Asso. for 1875, p. 686. But these and many other published processes are less simple and easy than that here proposed.

That here given is not original with the writer, but is alluded to in all standard works on chemistry; but, without the variation in quantity of sulphuric acid used, and without crystallizing out the potassium sulphate before the distillation, the process is impracticable,—or at least has always proved to be so in the writer's hands, and in the hands of all whom he has known to have tried it.

BROOKLYN, Jan. 12th, 1878.

Note on Emulsions.

PHOTOGRAPHERS have during the last two years readopted a method of preparing negative plates which had been proposed and practised many years ago, but, owing to adverse reports of reputed authorities, had been laid aside as useless. This method consists in covering the glass plate at once with a collodion containing the necessary amount of silver salts in form of an emulsion, while heretofore the operation had to be performed in two steps, one being the coating of the glass with collodion, and the other its maceration in the silver bath. The preparation of the silver emulsion, which we shall not discuss at present, requires a good deal of shaking, and our photographic friends, who generally have a good deal of mechanical genius, but do not possess the patience and brachial training of the pharmacist, have contrived a little apparatus, which appears to be equally useful for pharmaceutical emulsions. It was constructed by M. Alvergniat, and is illustrated in the accompanying figure.



Emulsion Apparatus.

Upon a flat rod of iron, A, 60 cm. (23.6 inch.) long, 3.5 cm. ($1\frac{1}{2}$ inch.) wide, and 1 cm. ($\frac{3}{8}$ inch) thick, are riveted at right angles two rods of iron, B B, 1.5 cm. ($\frac{7}{16}$ inch) in diameter and 35 cm. ($13\frac{3}{4}$ inch.) long, with spaces between them measuring 45 cm. ($17\frac{3}{4}$ inch.). The whole is fixed into a wall. On each of the rods is placed an iron ring, C C, provided with a screw, which serves to hold fast the ring at any point of the rod. Each of the rings, or rather clamps, has attached an iron rod D D D D, 85 cm. ($33\frac{1}{2}$ inch.) long, terminating at the bottom with a sort of eyelet. The 4 rods, D D D D, serve to support a little board of oak, E, 55 cm. ($21\frac{5}{8}$ inch.) long and 20 cm. ($7\frac{7}{8}$ inch broad, with supports, F F, so placed as to receive a bottle and fix it in a horizontal position. The whole system forms an articulated parallelogram which obeys the slightest movement.

If a to-and-fro movement is given to the frame, the bottle moves forward and backward in a straight line, and thus the liquid contained is vigorously agitated.

This movement may be imparted very easily by having recourse to a little water-engine constructed on the Schmidt system (the model employed for sewing machines), and which has a power of a few kilogrammes only. It can be readily understood that a small power only is required to set the apparatus going and to shake up several kilogrammes of liquid, all the weight being supported by the eyelets at C C. The Schmidt machine (M) works day and night without requiring to be watched; the greater and more continued the agitation the more perfect

will be the resulting product.—*Photograph. News*, 1877, 476.

The Liquefaction of the Gases.

THE last days of the past year will be forever memorable in the annals of science on account of the final accomplishment of a feat which Davy, Faraday, and other experimenters had failed to realize, namely the liquefaction of the elementary gases. On the 24th of December, the French Academy of Sciences was gratified by the announcement that oxygen had at last been liquefied on the 22d of December, 1877, in Geneva, by Pictet (a Swiss ice manufacturer), but greater still was the surprise when the Secretary of the Academy announced that he had had in his possession for nearly three weeks a sealed packet, containing the results of the experiments of Cailletet, who had followed up his recent work on nitric oxide, and had succeeded, on the 2d of December, in liquefying oxygen and carbonic oxide. Only another week elapsed, and then Cailletet was able to show that the end was full in view; for whilst nitrogen and atmospheric air had been unmistakably liquefied, hydrogen, submitted to similar conditions, gave indications which admit of little or no doubt that it had passed from the gaseous to the liquid state.

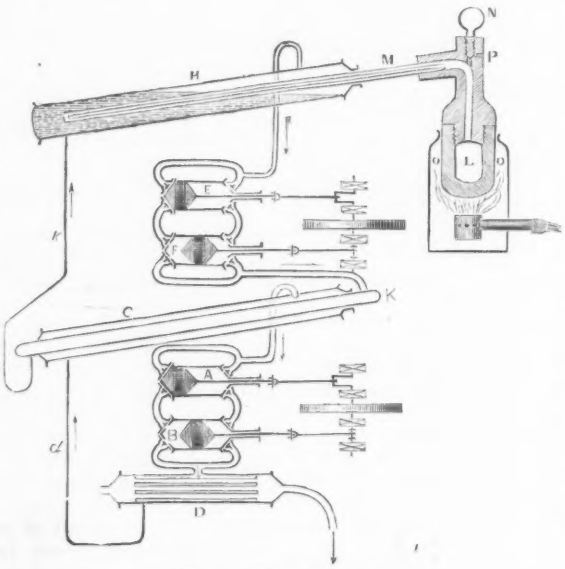


FIG. 1.—Pictet's Apparatus.

It will be obvious, on reading the account below given, that the work is not yet fully done. Before the results can be said to be complete, a way must be found of obtaining and retaining these bodies in the liquid form, so that their nature and properties may be more closely studied. Nevertheless there is great hope that this will soon be accomplished.

There being no essential difference in the methods by which each of these investigators succeeded in producing these results, except the construction of the apparatus, we will for the present describe only that followed by Raoul Pictet of Geneva, who gives the following account of his process and apparatus: "A and B (fig. 1) are two double-action suction and force pumps, coupled together on the 'compound' system, one creating a vacuum in the other in such a way as to obtain the widest possible difference between the pressures of suction and forcing. These pumps act on anhydrous sulphurous acid contained in the cylindrical receiver, C. The pressure within this receiver is such that the sulphurous acid is evaporated at 65° below zero. The sulphurous acid is forced into a condenser, D, cooled by a current of cold water, where it liquefies at a temperature of 25° above zero, and at a pressure of about $2\frac{3}{4}$ atmospheres. As it liquefies, the sulphurous acid returns to C, through a small tube, *d*. E and F are two pumps similar to A and B, and similarly coupled. They act on carbonic acid contained in a cylindrical receiver, H. The pressure in this receiver is such that the carbonic acid is evaporated in it at 140° below zero. The carbonic acid, driven back by the pumps, is forced into the condenser, K, inclosed in the sulphurous acid and receiver, C, which is at 65° below zero: the carbonic acid is here liquefied at the pressure of 5 atmospheres. It returns gradually, as liquefied, through the small tube, K, to the receiver, H.

"L is a wrought-iron retort, sufficiently thick to resist a pressure of 500 atmospheres. It contains chlorate of potassium, and is heated so as to give off pure oxygen; it communicates by means of a tubulure with a slanting tube, M, made of very thick glass, one metre long, which is surrounded by the carbonic acid receiver, H, the temperature of which is 140° below zero. A tap, N, in the neck of the retort, allows of the opening of an orifice, P, which communicates with the air. After the pumps, worked by an engine of 15 horse power, have been kept in action for several hours, and when all the oxygen has been given off by the chlorate of potassium, the pressure in the glass tube is 320 atmospheres, and the temperature is 140° below zero. If the orifice, P, be now suddenly opened, the oxygen escapes with violence, producing an expansion and absorption of heat sufficient to cause a liquefied portion to appear in the glass tube and spirt from its orifice upon sloping the apparatus.

It may be added that the quantity of liquefied oxygen contained in the tube, one metre in length, and 0.10 m. in internal diameter, occupied about two thirds of its length and issued at the orifice, P. in the form of a liquid jet."

After the close of the sitting of the French Academy, Mr. Dumas received a communication from Mr. Pictet, in which he describes another apparatus, by means of which the same results may be obtained to greater advantage. "A tube, 1.10 metres long, is filled with liquid sulphurous acid; this incloses a second tube containing liquefied carbonic acid, and within the latter is another tube, 14 mm. in external and 4 mm. in internal diameter, which serves as the oxygen compressor. By means of two suction pumps, acting alternately upon the liquid acids contained in the outermost and next following tube, the carbonic acid is throughout reduced to a solid condition at a temperature of 140° C. The small central tube is bent down at *c*, and screwed into the neck of a strong cylindro conical retort, made of wrought iron, the walls of which are 35 millimetres thick. Its height is 28 centimetres, and diameter 17 centimetres. This retort contains 700 grammes of potassium chlorate and 256 grammes of potassium chloride mixed together, fused, pulverized and placed in the retort perfectly dry. I heat the retort when the double circulations of sulphurous acid and carbonic acid have lowered the temperature to the point desired. The chlorate of potassium is decomposed slowly at first, but tolerably rapidly at the end of the operation. A pressure-gauge at the end of the long tube enables me to watch the pressure and the progress of the reaction. It was made on purpose for me by Bourdon, of Paris, this last summer, and is graduated up to 800 atmospheres.

"When the reaction is finished, the pressure exceeds 500 atmospheres; but it almost immediately falls, stopping at 320 atmospheres. If the screw-tap, E, at the end of the tube be opened at this moment, a jet of liquid may be distinctly seen escaping with extreme violence. If the tap be then closed a few seconds later, a second jet may be obtained, this time less abundant. Pieces of charcoal, slightly kindled, placed in this jet, ignite spontaneously with incredible violence. I have not yet been able to collect the liquid on account of the force with which it is projected; but I am now endeavoring to combine a cooled gauge, which may, by means of cloths, retain a little of the liquid.

"Yesterday (Monday, December 24th, 1877), I performed this experiment a second time before a good part of the members of our Physical Society, and we had three well-defined jets, one after the other. I cannot yet give the minimum pressure necessary, for it is evident that I must have had an exaggeration of the pressure produced by an accumulation of the gas in the retort, which resisted condensation in the narrow space represented by the inner tube.

"I intend using a similar apparatus to attempt the condensati n of hydrogen and nitrogen, and I rely especially on my ability to maintain low temperatures with ease, by means of my four large pumps, worked by steam-power."

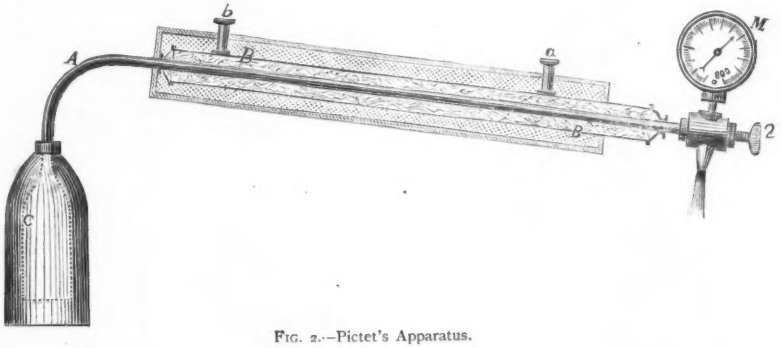


FIG. 2.—Pictet's Apparatus.

Albuminate of Iron.

MR. C. BERNBECK proposes the following improved method for the preparation of this compound. Evaporate any optional quantity of the officinal liquor ferri chloridi to dryness, dissolve 6 parts of the dry salt in 10 parts of distilled water, filter, mix the filtrate intimately with 20 parts of albumen (white of egg), transfer the brownish-yellow magma upon a wetted linen strainer, press well with the hands, and repeat this, under occasional addition of a little distilled water, until all excess of ferric chloride has been washed out. Then dissolve the residue in 500 parts of distilled water, acidulated with 15 parts of hydrochloric acid, by macerating a few days.

This compound is used with success in cases of chlorosis, but should be always freshly prepared when wanted. The addition to it, however, of phosphorated ether promotes its keeping qualities for at least 6 weeks. A mixture of 250 grammes of the solution of albuminate of iron with 12 drops of a solution of 0.05 grams of phos-

phorus in 30 grams of ether is said to be employed with advantage in rachitis.—*Arch. d. Pharm.*, 1877, December.

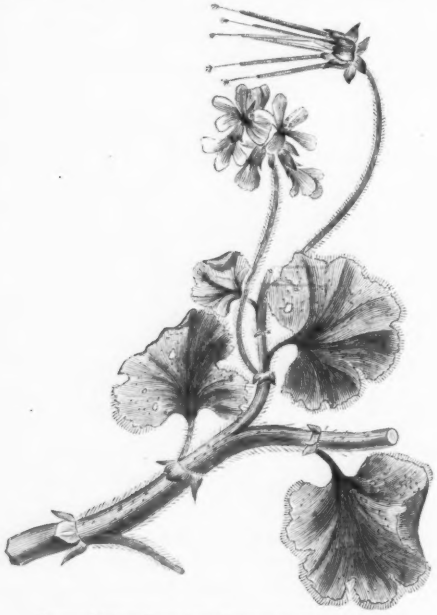
SCENT-YIELDING PLANTS.

BY G. W. SEPTIMUS PIESSE, PH.D., F.C.S.

(*Continued.*)

Geranium, Citronella, Patchouly, Verbena Grass.

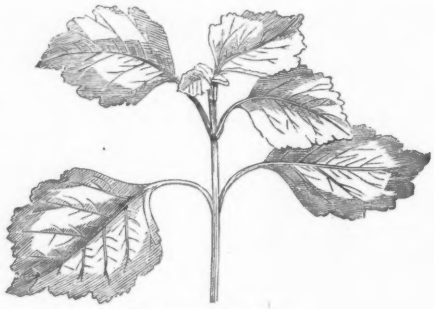
GERANIUM.—Several varieties of the natural order Geraniaceæ bear scent-yielding leaves; but although these plants were introduced into Europe from the Cape of Good Hope so far back as 1690, it was not until 1847 that the Pelargonium capitatum began to be systematically grown for the purpose of extracting its scent-yielding principle, known in commerce as the otto of rose-leaf geranium. This was first done by M. Demarson, of Paris, and since that time its cultivation has vastly increased in



Scent-yielding Geranium (Pelargonium capitatum).

France, particularly at Montfort-Lamaury, in the Department of Seine-et-Oise, and it has even more rapidly spread in Algeria, Mr. Monk, an Englishman, and Mr. Chiris pushing its production extensively. The same kind of culture is also carried on in Spain, by Señor Robillard, of Valencia. The propagation of the Pelargonium by means of slips is too well known to need description. One ton weight of leaves will yield by distillation an average of two pounds weight of otto, the lowest wholesale price of which is, say £6. Señor Robillard has about fifty acres of rose geranium under tillage, more or less, according to the demand. He strikes the cuttings from September to October, and puts them out in April; the plants have to be replaced every three or four years at the longest, the land being well manured annually. About 3,000 plants are required per acre.

PATCHOULY.—This is one of the most unique of scent-yielding plants. It is a Labiate, stated by some authors to be a native of Silhet, a district of Bengal, some 120 miles from Dacca; it is now, however, known to grow in Java and Ceylon, and also on the Malay coast, and one must say in China, because its odor is very clearly defined in the black-stick ink, commonly called Indian Ink, that comes from that country. Deccan Indian shawls were known in Europe as really of Indian manufacture by their peculiar odor, which was due to their being packed for exportation along with patchouly, a favorite scent-plant of the district. About the year 1850, patchouly began to be imported into this country in bales of 2 cwt. each, and some few adventurous dealers distilled it, and obtained small portions of otto, but at a great cost; the herb being badly harvested, and stacked too damp, became mouldy in transit. Europe, however, now obtains otto of patchouly from the



Pogostemon Patchouli.

fresh herb. A bale of good dry patchouly will yield about three lbs. of otto, worth about £14. The consumption of patchouly in the perfumery trade of Europe is something beyond belief.

VERVAIN.—An exquisite scent is derived from the Aloysia Citriodora, or Lemon-scented verbena. This plant, as a scent-yielder, is only cultivated, so far as I am aware, by Señor Robillard, of Valencia. He offers the otto for sale to the trade at 20*s.* the pound weight—a fact which indicates that the plant grows better in Spain than in England, where it will only live out of doors on walls; but we have no specific information to give as to its cultivation.

LEMON GRASS (Andropogon Citratus) is cultivated for the scent which it yields, to a large extent in Singapore and Ceylon, also in the Moluccas; it affords its otto freely by distillation. Lemon grass otto, or, as it is sometimes termed, "Verbena," on account of its similarity of odor to that of the Aloysia citriodora, is culti-

vated by Mr. Winter, of Ceylon, who produces annually about 1,000 lbs. weight of it. Mr. John Fisher, of Singapore, distils even more.

CITRONELLA GRASS (Andropogon Nardus) is cultivated both by Mr. Fisher and by Mr. Winter, its otto being obtained by means of distilla-

Verbena Grass (Andropogon Citratus). Citronella (Andropogon Nardus).

tion. The importance of the trade in this one article in Ceylon alone may be estimated at £15,000 annually. At Gaylang, Singapore, there are about 1,000 acres under citronella, lemon grass, and patchouly. Geranium grass otto is obtained from the Andropogon Schœnanthus. This grass, sometimes called ginger grass, it is a wild plant of Central and Northern India; its otto is produced by distillation, but it has not much reputation out of India.

On Dialyzed Iron as an Antidote to Arsenic.

FOLLOWING a paper contributed by Dr. T. B. Reed to the *Philadelphia Medical Times* of Dec. 8th, in which marked antidotal properties were claimed for dialyzed iron in cases of arsenic poisoning, Mr. Richard V. Mollison, of Philadelphia, submits a few additional notes on the same subject, as a result of analyses made previous to November 7th (published in resumé in the *Amer. Jour. of Pharmacy*). He believes that a solution of dialyzed iron has no action on arsenious acid except under certain conditions, and summarizes a number of facts, as follows:

1. That dialyzed iron, to be of value as an arsenical antidote, must first be precipitated by the action of some neutral alkaline salt.

2. That this precipitation and the consequent production of ferric hydrate are accomplished when this preparation is taken into the stomach; and that, therefore,

3. The solution of dialyzed iron is a valuable antidote for arsenical poisoning, and should be administered promptly in cases of emergency as a temporary antidote, followed, of course, by emetics.

Now it may readily be conceived that an antidote may be necessary in cases where the enfeebled stomach of the invalid may not be able to secrete sufficient gastric juice to precipitate the iron, even under the stimulus of the poison, or that the arsenic may be ingested into a healthy stomach entirely free from any gastric secretion. Although the mucus present might delay the absorption of the arsenic, the writer recommends that, in all cases, the administration of dialyzed iron as an antidote should be followed immediately by a teaspoonful or more of common salt to ensure the formation of ferric hydrate and the consequent neutralization of the poison.

The Foreign Chlorine Compounds Contained in Schering's Chloral Chloroform.

DR. SCHACHT has on several previous occasions reported the results of his investigations on the purity and keeping qualities of chloroform prepared from chloral, as manufactured by several large German firms. These results are of considerable importance for the consumers of chloral hydrate in this country. Dr. Schacht has shown that *Schering's* chloral chloroform perceptibly tinges pure sulphuric acid when shaken with it, and by separately studying the various known by-products obtained in the manufacture of chloral, he is led to the conclusion that the original chloral, from which the chloroform is obtained, is contaminated with ethene chloride ($C_2H_4Cl_2$, Dutch liquid), dichlor-ethane ($C_2H_4Cl_2$, æthyliden-chloride), trichlor-ethane ($C_2H_4Cl_3$), and ethylchloride (C_2H_5Cl)* in various proportions. All these substances, by themselves, color sulphuric acid brown; those first mentioned more intensely and rapidly than the latter. From these results he concludes that Schering's chloral is itself contaminated with foreign chlorine compounds. *Duncan's* (Edinburgh) chloroform, which is prepared from "pure" alcohol, was also found by the author not to be entirely pure, since it did not stand

* On these products see NEW REM., 1877, pg. 306 sqq.

the test which the author regards as the most searching: namely, to allow the chloroform to stand over sulphuric acid in a flask filled with chlorine gas for a few hours in the sunlight. The only German chloral chloroform which stands this test is that prepared by Hofmann and Schötensack (formerly *Saame & Co.*), of Ludwigshafen on the Rhine. Since the author's standing is of such a high character as to utterly exclude any imputation of partiality, we deem it of great importance to guard our readers against using any chloral which is not known to be absolutely pure. We have lately heard of several complaints from prominent pharmacists and physicians about the excessive acridity of some lots of Schering's chloral compared with that of some other foreign and our own manufacturers, and can see no other explanation of this fact than that given by Dr. Schacht.

Biltz has likewise examined Schering's chloral chloroform, and has found similar results. When poured upon sulphuric acid it produced a yellow zone at the point of contact. In order to remove the foreign body, the chloroform was thoroughly shaken with pure sulphuric acid and then separated. Having thus removed the body, which by *itself* imparted color to sulphuric acid, and having proved its entire removal by renewed treatment in the same manner, he repeated the test, with the addition, however, of chlorine. This produced again a coloration of the acid of the same intensity as before, and proved, therefore, that the chloroform in question not only contained a compound which *by itself* colored sulphuric acid, but that it contained still a *second* compound, which was converted by chlorine into another also capable of coloring sulphuric acid. The body which *directly* colors the acid is either ethene chloride (Dutch liquid) or dichlorethane (æthyliden-chloride), or both.—*Pharmaceutische Zeitung.*

Grindelia Robusta in Asthma.

The Clinic reports an obstinate case of asthma which was entirely relieved by a two-grain pill of Grindelia robusta given three times daily. The medicine was thought to be the cause of a violent diarrhœa, which came on at the end of three weeks.

Koumys in the Treatment of Nausea and Vomiting.

Dr. V. Jagielski has an article in the *British Medical Journal* of Dec. 29th, on the value of koumys in affections where other food will not be retained by the stomach, and cites a number of cases to illustrate the success following its use.

Jaborandi as a Remedy in Hydrophobia.

Dr. J. G. S. Coghill reports two cases of hydrophobia treated by him in China, and reviewing the symptoms, he suggests that jaborandi might be a valuable remedy.

WARREN'S STYPTIC BALSAM.

In answer to the comunication on page 19, we have received letters from A. P. Happer, "A. B.," Dr. Heule, Jr., H. O. Walker, M.D., Dr. John Mulberry, and P. M. Way, M.D., to all of whom we return our thanks.

The original formula appears to have been published by Dr. James Warren, of Boston, in the New York *Journal of Medicine* in 1854 and read as follows:

℞ Acid. Sulphurici..... .... ʒ v. (by weight)
Spts. Terebinthinæ,
Spts. Vini rectif .....āā f. ʒ ij.

"Place the acid in a Wedgewood mortar, and add the turpentine slowly, stirring it constantly with the pestle; then add the alcohol in the same manner, and continue stirring it until no more fumes arise, when it may be bottled, and should be stopped with a ground-glass stopper. None but the purest materials must be used, and when done, it should exhibit a dark but clear red color, like dark blood; but if it be a pale dirty red, it will be unfit for use. The dose is 40 drops, and the method of using is as follows: Put a teaspoonful of brown sugar in a tea cup, and rub in 40 drops of the balsam until thoroughly incorporated, and then slowly stir in water until the cup is nearly full; when it should be immediately swallowed. This dose may be repeated at intervals of an hour, until three or four doses have been taken, if necessary; and its use should be discontinued when fresh blood ceases to flow. After standing a few days, a pellicle forms upon the surface of the balsam, which should be broken and the liquid below it used. It does not deteriorate by age, if tightly stopped."

The "balsam" is recommended to be used in hemoptysis, hematemesis, epistaxis, and menorrhagia, and some of our correspondents say that it has proved very serviceable in their hands.

Veratrum Viride in Puerperal Convulsions.

Two years ago, Dr. O. S. Boyd's suggestions in regard to the treatment of puerperal convulsions with veratrum viride were sharply criticised as being extra hazardous. In the January number of the *American Practitioner* he publishes a paper on the same subject, referring to ten cases treated by Dr. Fern of Brooklyn, and yet another which came within his own observation. The patient, a primipara, had four convulsions, at intervals of 30 to 75 minutes, and lasting from 5 to 7 minutes. A few minutes after the last one, consciousness having been recovered, 20 drops of the tincture of veratrum viride were given, and the dose was repeated every 15 minutes until 120 drops had been taken. Following the sixth dose the pulse had fallen from 144 to 130. Ten minutes after this dose had been taken, the patient vomited nearly a pint of tenacious mucus, colored by the veratrum. Within

ten minutes after the vomiting began, the pulse was 54 per minute. Vomiting followed three times in quick succession, and she was then given 25 drops of laudanum, and this was repeated at every subsequent attack of vomiting, which amounted to four times in all. A quiet sleep then came on. Directions were given to resort to the veratrum whenever the pulse rose to 80, and two doses only at long intervals had to be given. The patient made a good recovery. Dr. Boyd believes that the use of veratrum will come to be considered no more hazardous than that of ipecacuanha, and much less dangerous than Lobelia inflata; and that it will entirely supersede the resort to blood-letting.

Detection of Free Sulphuric Acid in Wine and Vinegar.

NESSLER'S method of detecting free sulphuric acid in wines and in vinegar is as follows: Strips of filtering paper, 12 to 16 inches long, are suspended so that only the lower edge dips into the liquid to be examined. The latter ascends in the paper by capillary attraction. Now, as free sulphuric acid does not evaporate, it accumulates and becomes concentrated at the upper limit, to which the fluid rises. After 24 hours, the strips are dried and heated in a water-bath at a temperature below 100° C. (212° F.). If free sulphuric acid is present, the paper, at the upper limit, will be found to have become brown to black, and generally quite rotten. Minute quantities of sugar, not exceeding 0.5 per cent., increase the delicacy of the reaction.—*Pharm. Centralh.*, 1877, 329.

Note on the Different Products known under the Name of Creosote.

THE researches of Bouchard & Gimbert (de Cannes) (*Gaz. Hebdom.*, 31, 32, 33) have proven two points: the efficacy of creosote in pulmonary phthisis, and the difficulty of obtaining a commercial article perfectly pure, such as Reichenbach has obtained from wood-tar, especially from beech-wood. There are various articles found in the market which have antiseptic properties, are soluble in alkalies, boil at 200°, all of which, notwithstanding their various sources, bear the name of creosote.

The creosote most commonly in use is obtained by distilling coal tars rich in heavy oils, raising them up to 150°–210°; it is isolated by redistilling the products which have furnished phenol and begins to pass over at from 195°–210.°

In reality, this creosote should be considered as impure phenic acid mixed with cresylol or cresylic alcohol.

The properties of phenic acid (C_6H_6O) are well known; those of cresyl (C_6H_8O) are nearly analogous. Creosote of coal-tar can be readily detected by producing an intense violet color in a weak solution of perchloride of iron. This reaction, which belongs properly to the phenic acid, is not produced by creosotes formed from wood-tar. The creosote of beech-tar, discovered by Reichenbach and studied by Hlasiwetz & Barth, is characterized by the presence of creosol, which is a diatomic phenol, homologous with guiacol, and may be considered as homopyrocatechin or bioxytoluol (orcin). Creosol colors an aqueous solution of perchloride of iron brown; it boils at 219° C., is soluble in alkalies, with which it forms cresolates; those of potash crystallize readily; those of soda are uncrystallizable. The neutral cresolate of potassium is easily obtained by mixing a concentrated alcoholic solution of potash with the creosote dissolved in half its volume of ether. This is the form best adapted for therapeutic purposes.

The following is a table of the reactions characterizing the two kinds of creosotes:

REAGENTS.	CREOSOTE OF BEECH. (Creosol.) $C_8H_{10}O_2$	CREOSOTE OF COAL. (Phenol and Cresylol.) $C_6H_6O+C_7H_8O$
Collodion.	None.	The mixture becomes gelatinous.
Ammonia.	Insoluble, hot and cold.	Insoluble cold, soluble hot; liquid clear.
Baryta water.	Solution imperfect, liquid becomes turbid on standing.	Solution clear, but after a while a slight deposit forms.
Weak Potash.	Turbid even with excess of reagent.	Solution clear.
Gtt. ij. ammonia, then perchloride of iron q. s. to redissolve the precipitate; four volumes water.	Color green, then brown.	Color blue.

—*Gazette Hebdom.*

Strychnia as a Remedy in Bronchitis.

J. MILNER FOTHERGILL, writing from London to the *Philadelphia Medical Times*, says:—

In this season of *bronchitis*, it may be practically useful for your readers to know the great utility of strychnia as a true expectorant by its action upon the respiratory centre. Like ammonia, it does not act upon the mucous lining of the air-tubes, but upon the nervous centres of the respiration. The experiments of Prokop, Rokitansky, and others, with this agent, show that it has a decided action in stimulating the respiration by acting upon the respiratory centre in the medulla oblongata. Ammonia acts in the same manner. Ammonia is commonly added to cough mixtures for its stimulant expectorant effect. It enables the patient to respire more perfectly and so to expectorate the phlegm more effectually. This is of the utmost importance in bronchitis when the stage of free secretion is reached and the air-tubes are full of mucus and the patient is in danger of choking. Here the battle lies betwixt the powers of the patient and impending exhaustion. The ordinary mixture of carbonate of ammonium, spirits of chloroform, and senega is very useful; and some tincture of squill will be found a useful addition.

But increasing clinical experience of strychnia leads the writer to the conclusion that of all agents which exercise a stimulant effect upon the nervous mechanism of the respiration, strychnia is one of the most potent and useful. Strychnia acts powerfully upon the expiratory part of the respiratory act, and kills, by producing spasm of the muscles connected with expiration. It is very useful, then, when expiratory efforts are required for the expulsion of mucus gathered in the air-tubes. In chronic bronchitis, with emphysema, it is of great service, and in the dyspnœa connected with advanced Bright's disease it is very efficacious. It produces good effects when given alone, and is a useful addition to ordinary cough mixtures. A combination of carbonate of ammonium, tincture of nux vomica, and tincture of squill, is a most excellent mixture for patients suffering from dyspnœa, and generally procures them "more breath," as they phrase it. One of the most important matters connected with such use of strychnia is its relation to sleep. In many of these cases sleeplessness is a prominent factor; and sleep can be procured only by a narcotic. But while the narcotic acts upon the nervous system generally, it also acts upon the respiration, probably at its centre in the medulla, and the patients are apt to wake up with an attack of dyspnœa. A series of cases has demonstrated that by the use of strychnia the respiration is so improved that the patient can go to sleep without the narcotic, and, more than that, sleep fairly well, and be quite free from attacks of breathlessness, which awaken the patient and cause him to add voluntary respiratory efforts to the automatic act of respiration. By resort to strychnia these patients can be much relieved. In a case seen recently of complex lung and heart mischief, to which was added chronic chloral poisoning, the good effects of strychnia were very marked. The patient was almost at once relieved from the attacks of dyspnœa in the middle of the night, to which he had long been subject. By the use of strychnia during the day, a narcotic pill at bedtime is often deprived of its tendency to produce nocturnal dyspnœa; and strychnia may be usefully prescribed in cases of shortness of breath, where there has been also long indulgence in hypnotics. There is no such thing in this world as unalloyed good, and strychnia, so used, sometimes acts so powerfully upon the bladder-centres, and produces such irritation there, as to necessitate its discontinuance. But this is not the rule by any means.

The Preparation of Peptone.

In the session of the Pharmaceutical Society of Berlin, of December 18th, 1877, Mr. Hobe read an interesting paper on the above subject, for which we are indebted to the *Pharm. Zeitung* (No. 102).

The best process for preparing the so-called peptone, or pancreatic meat-solution, is due to Dr. Adamkiewicz. Fresh blood is converted into a colorless mass by quirling and protracted kneading, followed by washing with frequently renewed soft water, holding in solution a small quantity of ammonia. The pressed white fibrin thus obtained is comminuted into fine shreds in capacious dishes, and covered with a large quantity of water containing 0.2% of hydrochloric acid. The fibrin thereby soon swells up, and gradually becomes converted into a pellucid jelly, which is now ready for the addition of the ferment, namely, pepsin. The latter is obtained from the mucous membrane of the hog, and for the present purpose is preferably extracted by means of glycerin. Alcohol is first added to the finely cut membranes, in order to coagulate the albumen, after which they are dried by exposure to air, and then covered with glycerin, which abstracts the pepsin in the course of a few weeks. The clear yellowish-red glycerole of pepsin is poured over the fibrin-jelly, and the whole heated for some time in a water bath at a temperature of 50–60° C. (122–140° F.) The compact mass soon begins to liquefy, and is converted finally into a thin fluid of a gray opalescent color. In from 2 to 5 hours large masses of fibrin may in this manner, as it were, be digested. The crude liquid is now separated by straining from any undigested shreds, and carefully neutralized with sodium carbonate, which causes the separation of a flocculent gray precipitate, the so-called para-peptone. This is removed by filtration. The filtrate, which has a clear straw-yellow color, is faintly acidulated, once more filtered and evaporated to the consistence of honey at a temperature not exceeding 70° C. (158° F.).

Peptone is distinguished from ordinary albumen by its proneness to solidify in the cold, and to return to a liquid state when heated, being thus just the reverse of albumen. For internal administration, it has been found best to mix it with extract of beef in the proportion of 5 parts of the latter to 100 parts of peptone. Sixteen grammes, or one tablespoonful of this peptone are equivalent, in nutritive power, to 20 grammes of lean meat. A dry peptone may be prepared by precipitating the original liquid with alcohol, treating the precipitate repeatedly and for some time with alcohol and ether, then dissolving in a little water, and drying at 30° C. (86° F.). In this state it forms a glassy, brittle mass, easily pulverizable and readily soluble in water. Long keeping is said to impair its solubility. It has a neutral reaction, and reduces alkaline copper solution.

The Kinds of Iron Useful in Pharmacy.

The Pharmacopœia recommends iron wire as material for iron preparations; musical wire, being steel and, therefore, purer, is also often

applied, and will yield sufficiently pure preparations. Their analyses are as follows :

	Iron wire.	Musical (steel) wire.
Carbon	0.2730 per cent.	0.5320 per cent.
Silicon	0.1418	0.0700
Phosphorus	0.0309	0.0427
Sulphur	0.0610	0.0182
Manganese	0.7027	0.0600
Copper, trace		
Iron (Fe)	98.7406	99.2771
	100.0000	100.0000

(Quantity taken for analysis, 20 grams.)

The material I would recommend is soft steel drillings, they being cheaper, purer, and not so difficult to dissolve as wire, which, by the different mechanical processes of forging, hammering, rolling and final drawing, has become denser and harder. The more impure an iron, the quicker it will dissolve; but the same piece of iron or steel will more rapidly dissolve the less it has undergone the above-mentioned mechanical treatments. If we consider the immense amount of mechanical labor to which an iron or steel bar is subjected until its diameter is reduced to that of a wire, it is evident that soft steel drillings, shavings or turnings deserve preference. Axles and steel boiler plate, of which turnings and drillings can easily be obtained at any steel-work or machine shop, rank among the purest brands of iron, in the chemical sense of the word. Their composition is shown by the following analysis :

	Axle.	Boiler-plate.
Carbon, combined	0.2700 per cent.	0.3010 per cent.
Silicon	0.0800	0.0492
Phosphorus	0.0382	0.0298
Sulphur	0.0157	0.0163
Manganese	0.0747	0.0643
Iron (Fe)	99.5124	99.5394
	100.0000	100.0000

(Quantity taken for analysis, 20 grams.)

It may be considered a practical rule that any brand of steel that will make good axle or boiler-plate will also yield pure preparations on dissolving.—HENRY G. DEBRUNNER, *Amer. Jour. of Pharm.*

SODIUM BICARBONATE AS A REMEDY FOR BURNS.

EDITOR OF NEW REMEDIES :

SIR :—A friend of mine, an English chemist, laughs at the idea of bicarbonate of sodium being a new treatment for burns.

He says that in England, twelve years ago, it was known to all working chemists. When in the laboratory, if he was burned by any mixture, he would run to the soda-drawer, grasp a handful, and plunge his hands into water, getting instantaneous relief. Yours, etc.,

E. A. CARPENTER.

PLATTSBURGH, N. Y., Jan. 23d, 1878.

AN EXPLOSIVE MIXTURE.

EDITORS OF NEW REMEDIES :—In your issue of January, on page 27, you notice an explosion from a mixture which recalls a similar accident occurring in my own practice some time since.

In a case of sore throat I directed the following mixture :

℞. Tinct. Ferri chloridi ..... ℥ ij.
Potassii chloratis ..... ʒ j.
Glycerinæ pur. ..... ad ℥ iij. M.

Some of this mixture was left, and the lady of the house, desiring to keep it for a similar emergency, started one day, some length of time after its use, to carry it to a store-room, the entrance to which was out of doors. When outside, thinking of other articles, she set it down on the verandah *in the sunshine*, and returned for those other articles. When coming back she heard an explosion, and upon reaching the verandah she found it on fire. It burned so rapidly that, before it was subdued, it had done considerable damage. She said the explosion was quite violent.

At the time I speculated much upon the phenomenon, but without any satisfactory result. I made extensive inquiry among druggists and physicians who used these ingredients in combination, but could learn of no accident occurring from the combination.

Whether the small amount of acids in excess in ℥ ij. of the tincture was sufficient to produce such powerful chemical action in combination with chlorate of potash, I leave to your consideration.

I am, sirs, most respectfully,
J. H. GREENE, M.D.

FIFTH ST., DUBUQUE, IOWA, January 25th, 1878.

Solubility of Sugar in Water.

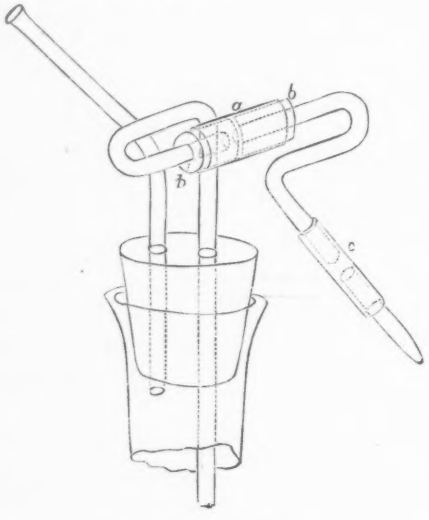
M. H. COURTONNE has read before the Academie des Sciences a somewhat important paper on this subject. The results which seem to be beyond dispute are as follows. The solubility of sugar in water at a temperature of 12.5° C. (54.5° F.) is 198.6 in 100. At a temperature of 45°C. (113° F.) it is 245 in 100. In other words, 100 parts by weight of a saturated solution of sugar at 12.5° C. (54.5° F.) contain 66.5 parts by weight of sugar, and at a temperature of 45° C. (113° F.) contain 71 parts of sugar.

Poisoning by a Small Dose of Gelsemium.

WHARTON SINKLER, M.D., reports in the *Philadelphia Medical Times* that a woman aged 49 took, during two weeks, f. ℥ i., of Hance's fluid extract of gelsemium for the relief of severe neuralgia of the fifth cranial nerve. She commenced with taking five drops three times daily. Ten days later she reported that the pain had not been lessened, but that the medicine had caused dimness of vision after each dose. The medicine was, however, continued, and five grains of

cinchonidia sulphate were also taken at each dose. Two days later she became unable to sit up or move at all. The extremities were cold, the pulse small and feeble, inspirations sighing or jerky, pupils dilated and the eyes suffused. There was paralysis of the bladder with general muscular enfeeblement, most marked on the right side. It was now learned that from the first dose there had been paralysis of the bladder [sphincter?] for an hour or two each time that the medicine had been taken. Suspension of the remedy allowed the above symptoms to speedily disappear. At no time, even during the toxic condition described, was the neuralgia lessened in severity, but it subsequently disappeared under the influence of the cinchonidia.

Dr. Sinkler thinks that the susceptibility of the patient was increased from her having taken but little food for several days.



Jet for a Wash Bottle.

THE jet for a wash-bottle figured above is in general use in Prof. Bunsen's laboratory. *A* represents a piece of stout glass; *bb* are two corks, and *c* a piece of india-rubber tubing. One finger serves to guide the jet in any direction.

A New Method for Estimating Sulphuric Acid in Vinegar, etc.

THE methods most commonly used for the determination of sulphuric acid in vinegar consist in estimating the total suphuric acid as barium-sulphate, and deducting from it the amount found as sulphates in the ash, or in taking the acidity of the vinegar after evaporating the acetic acid on the water-bath.

The first of these methods is open to the objection that all chlorides present are converted into sulphates, thus taking up part of the sulphuric acid originally present in the free state. In the second method, it is difficult to drive off the acetic acid without charring some of the organic matter, and consequently forming sulphurous acid; in addition, the objection to the former method applies equally to this, as any hydrochloric acid formed by the action of the sulphuric acid upon the chlorides present would be volatilized.

Mr. W. C. Young proposes to take advantage of the decomposition of chlorides by sulphuric acid, to estimate the quantity of the latter present by determining the amount of hydrochloric acid liberated. This may be done in the following manner: to 30 cc. of the vinegar under examination is added an excess of barium chloride, and the liquid made up to any convenient bulk; in one-third of the liquid, which is equal to 10 cc. of the vinegar, is estimated the total chlorine by means of standard solution of silver nitrate, after carefully neutralizing with weak soda solution; the remaining two-thirds are evaporated to dryness, carefully incinerated, and the chlorine in the ash estimated as before. The difference between the two results, calculated for the same quantity of vinegar, is due to volatilized hydrochloric acid, from which the sulphuric acid may be deduced by calculation.

This method has given to the author uniformly exact results; it takes but a short time, and indicates only the free sulphuric acid present. It is, of course, equally applicable to lime-juice or lemon-juice.—*The Analyst*, 1877, 163.

Distinction of Natural and Artificial Butter.

DR. HERMANN HAGER, having occasion to examine a specimen of butter for its freedom from oleomargarine or artificial butter, made a large number of experiments in order to arrive at a method, either chemical or physical, which would permit the two kinds to be distinguished. Neither the microscope, however, nor solvents or reagents were found to give reliable results. The only trustworthy test, according to him, is the odor given off on burning the butter. This may be done in two ways:

1st. Allow the warm melted butter to become clear by standing, saturate cotton lamp-wick with the clear fat, ignite the wick, and extinguish it after two minutes. The odor arising from the wick, in the case of genuine butter, is the pleasant smell of strongly fried butter; the presence of oleomargarine, however, betrays itself by the well-known fetid odor (acrolein) of a recently extinguished tallow-candle.

2d. Into a small glass flask place one volume of the clear fluid butter and two volumes of a mixture of one volume pure concentrated sulphuric acid and two volumes of alcohol of 95–98 per cent. Attach to the flask a bent glass-tube, apply the heat of an alcohol-lamp and distil over 2–3 cubic centimetres, which are collected in a test tube. Rub a few drops of the distillate be-

tween the palms of the hands: pure butter treated in this manner yields a pleasant odor of butyric ether, somewhat resembling that of rum; oleomargarine, on the other hand, betrays itself by a slight fruit-like odor, followed by the disagreeable smell of old tallow.

It is particularly necessary, in both cases, to allow the melted butter-fat to become perfectly clear, and entirely free from any particles of casein.—*Pharm. Centralhalle*, 1877, 412.

Butter Analysis.

In connection with the foregoing article it will be of interest to describe a process, devised some years ago by Messrs. Hehner and Angell, which has lately received the prize (in part) of the Pharmaceutical Union of Leipzig (see New Remedies, 1877, p. 96), and which is probably the only safe method of distinguishing between artificial and natural butter. It depends upon the fact that pure butter contains between 85.5 and 87.5 per cent of fatty acids, while other animal fats contain 93–95 per cent. A butter adulterated with the latter will therefore yield an amount of fatty acids, in excess of the normal quantity, in proportion to the percentage of foreign fats present. The process is the following: Melt 20 grammes of butter in the water-bath, and separate the butter-fat from the sediment (buttermilk) by filtering through a dry filter. Five grammes of the pure butter-fat are placed into a porcelain capsule, or better into a beaker, 50 cc. of alcohol and 2 grammes of dry pulverulent caustic soda are added for the purpose of saponification, and the whole is heated until the addition of a few drops of distilled water ceases to produce a cloudiness in consequence of separated fat. The soap-solution is then evaporated on the water-bath to dissipate the alcohol, and the residue is dissolved in 100 cc. of water. To the solution is added hydrochloric acid to strongly acid reaction (10 cc.), which causes the separation of the fatty acids as a caseous mass upon the surface. Instead of attempting to separate and weigh them in this condition, as Hehner originally proposed, Mr. O. Dietsch, of Zurich, suggests the improvement of adding 5 grammes of dry white or yellow wax, which melts in the hot liquid and unites with the free fatty acids. When the liquid has become entirely cold, the wax-layer can be easily removed, when it must be washed with cold water, dried, and weighed. The excess of weight over 5 grammes (the amount of wax) is the fatty acids contained in 5 grammes of the butter, which, multiplied by 20, gives the percentage. Five grammes of pure butter should yield 4.30 to 4.35 grammes of fatty acids, corresponding to 86–87 per cent.

Poisoning by Bicarbonate of Soda.

M. Mialhe states, in a communication to the Academy of Medicine, that the bicarbonate of soda may act as a poison if, on account of disease of the kidneys, it is not eliminated as rapidly as it should be.

Under ordinary circumstances it may be taken in large, and even in enormous doses without injury. He mentions one case where 120 grammes were taken daily with impunity.—*Gaz. Hebd.*

Skimmed Milk in Cystitis.

A writer in the *Am. Practitioner* speaks decidedly in favor of the value of skimmed milk as a remedy for cystitis, a number of cases of which, caused by protracted gonorrhœa, having come to his notice.

Skimmed Milk in Diabetes.

Dr. W. H. Jones reports a case of a man, aged 42, who following severe mental strain had diabetes, passing 8 to 10 pints of urine daily; urine had a s. g. of 1047°, and contained an abundance of sugar. Milk was given after every vestige of cream had been removed, and in quantities not exceeding 7 pints *per diem*. In 5 days, the s. g. fell to 1038°, and the quantity to 4 pints daily. In less than 30 days the s. g. reached 1018°, and the quantity of urine soon diminished to 2½ pints daily, the sugar having completely disappeared. A return to ordinary diet, somewhat later, caused no relapse of the diabetes.—*Chicago Med. Jour. and Exam.*, 1878, p. 31.

Rectal Alimentation.

The *American Practitioner*, of January, has a paper by Prof. Austin Flint on rectal alimentation which, though presenting nothing especially novel, contains many practical suggestions that will encourage greater attention to the value of this valuable resource. Leube's meat solution (prepared in this country by Mr. F. Hoffman, 797 Sixth Ave.—See New Remedies, vol. v., p. 250) is recommended, and Dr. Flint also advises pancreatic meat solution, and Liebig's extract of meat with milk and eggs, and broth of beef, mutton or chicken, to be used also, in which he differs from Leube, who considers them to be unsuitable for rectal alimentation.

Glycerin in the Treatment of Internal Hemorrhoids.

David Young, M.D., writes that two years since his attention was directed to the effect of glycerin in relieving the symptoms of internal hemorrhoids, and he has since used it in a few cases with uniformly good results: two or three teaspoonfuls taken in water morning and evening, with a little lemon-juice, if the taste of the glycerin is disagreeable to the patient. In all cases the feeling of discomfort and bleeding have been arrested.—*The Practitioner.*

RECENT PAPERS.

Pharmaceutical Journal and Transactions. No. 391.

W. DYMOCK: "Notes on Indian Drugs." [*Picrorrhiza Kurroa*, local name Kutki and Kurroo. The rhizome is a valuable tonic in doses of 10–20 grains. *Echium*, spec. (?), local Gaozaban; the flowers Gal-i Gaozaban. The leaves, generally mixed with pieces of the stem, as well as the flowers, are imported from Persia. They are used in bilious affections as a valuable alterative tonic. *Valeriana Hardwickii* (?), local Tugger Gauthoda. The roots are used in Bombay mostly as a perfume, but would no doubt form a good substitute for valerian. *Grislea tomentosa*, local Dhaitee or Dhawnee. The flowers are used by the natives; commercially they are of considerable importance, being used in dyeing and tanning. *Asclepias curassavica*, local Kurki. The root, when fresh, exudes a milky juice. [It is a native of the West Indies, where it is known as Bastard or Wild Ipecac, because it acts as an emetic in doses of 20–40 grains. The expressed juice of the leaves is said to be an efficient anthelmintic.—ED. N. R.] *Aconitum*, spec. (?), local Judwar. The history of this drug is beset with many difficulties on account of the vague meaning of the term *judwar*, the name by which it is generally known, and appearing properly to mean 'zedoary.' Under judwar the author of the 'Makhzanu l Adwiya' gives Antila as the Arabic name, and Saturyoos as the Greek. The Indian name Nirbishi, he explains as Nir 'the antidote to,' Bish 'the poison.' It appears that the term judwar has at different times been applied to various tuberous roots supposed to have alexipharmic properties, and that in India it is applied to the root of an aconite known from an early date to the Hindoos as Nirbishi.*]

J. B. JACKSON: "Sanguinaire or Thé Arabe." [A sample of Algerian "Tea" was sent to Kew, under the name of "Sanguinaire" or "Thé Arabe." Mr. Holmes found it consist of the flower-heads of *Paronychia argentea* Lam., a plant widely distributed through the Canary Islands, Spain, and the Mediterranean region. A letter accompanying the package stated that the term "Thé Arabe" is also applied to infusions of *Globularia Alypum*, *Cistus albidus*, and *Verbena triphylla* or *Aloysia citriodora*.]

Canadian Pharmaceutical Journal. December.

E. B. SHUTTLEWORTH: "On the Specific Gravity and Strength of Dialyzed Iron." [The author finds that a solution of dialyzed iron, free from ferruginous taste, unaffected by infusion or tincture of gall, and not giving direct evidences of the presence of hydrochloric acid, may be assayed with tolerable exactness by taking its specific gravity. A gravity of 1046 corresponds to 5 per cent of residue left after ignition; a gravity of 1038 corresponds to 4.3 per cent.]

Schweiz. Wochenschrift f. Pharmacie. Nos. 45–49.

J. DEPIERRE: "Manufacture of Indigo." [On the coast of Coromandel and in Pondicherry, the indigo plantations are located upon elevated rich loam ground, which is much preferred to sandy soil, as the latter does not retain moisture. The seeds of the indigo plant are planted in March, in intervals of 6 centimetres. After 3 to 5 days the young plants are weeded, until they have attained a height of 20 to 24 c.m. After 90 days flowering has set in, and then the first cutting takes place. The second crop, in September, is the most abundant; and this is followed by a third crop in January, which yields an equally good, but less abundant product. The plants, which are cut off 20 c.m. over the ground, are laid under water into vats, where they remain from 18 to 20 hours, until the rising gas bubbles burst at once and the liquid has a yellowish-green color. The latter having been drawn off, it is violently agitated during 1½ to 3 hours, by coolies standing in it naked, by means of wooden shovels, whereby the liquid assumes a dark blue color. The indigo is then allowed to settle, this being promoted by a decoction of Jambol-bark (from *Syzigium Jambolanum* D. C.), which contains about 11 per cent of tannin. The mass is then drained, washed, boiled with water, again drained, pressed, and slowly dried.]

El Restaurador Farmaceutico. 1877. Nos. 16–20.

BOUGAREL: "Phyllic Acid." [The author has discovered in a great number of plants, particularly such as belong to the order Rosaceæ, a crystalline substance, which he found to have acid properties. The leaves of the quince, apple, peach, almond, fig, 'jaborandi,' etc., are exhausted with boiling alcohol, the solution concentrated, separated from resinous and waxy deposits, evaporated to dryness, and the residue exhausted with ether; the ethereal solution is treated with animal charcoal to deprive it of the green coloring matter; the residue of the ethereal solution consists of a slightly bitter, mixed with a fatty substance. The latter may be partly removed by boiling water. On repeated solution and washing, the substance in question separates in shining, strongly refracting grains. The author assigns to it the [doubtful] formula $C_{72}H_{84}O_{16}$?]

Bulletin General de Therapeutique. 7–11.

M. YVON: "Hydrate of Chloral as a Vesicant." [The author, after numerous experiments upon himself and others, states that chloral is not a vesicant, but a caustic. It may under certain circumstances produce vesication, but it is impossible to limit its action to vesication alone, with any degree of certainty.]

C. PAUL: "Treatment of Metrorrhagia by Hypodermic Injections of Ergotine." [Giving the details of 14 cases in which the uterine hemorrhage was arrested in from 5 to 16 minutes, by the following solution.

Ergotine..... 2 grammes,
Water,
Glycerin, āā..... 15 grammes,

of which from 1 to 2 grammes were injected. M. Paul concludes that the hypodermic injection of ergotine is the most rapid and the most efficacious means that we have at our disposal in the treatment of metrorrhagia.]

C. MEHU: "On the Composition of Wood-Lice." [The Wood-louse (Oniscus asellus), and the Armadillo (Oniscus armadillo), being still included in the list of officinal natural remedies in the last edition of the French codex, Dr. Mehu thought he would ascertain whether they possessed the diuretic properties popularly ascribed to them. He analyzed several specimens of each, and found 1 per cent of chloride of sodium, $\frac{1}{10}$ per cent of chloride of potassium, and a minute quantity of phosphate of lime, but no nitrates. He recommends that they be omitted in the next edition of the codex.]

D. ENTYBOULE: "Treatment of Chancroid by Chlorate of Potash." [The author recommends the employment of the chlorate of potash in doses of 3 to 4 grammes internally, and a permanent application of a supersaturated solution externally. If the chancroid is not ulcerated, it should be cauterized before applying the chlorate externally.]

DR. WATELET: "Accidents following the Administration of Salicylic Acid." [The details are given of two cases of rheumatism treated by salicylate of soda, one of which was followed by gangrene of the lower extremities, and both by cystitis, obstinate constipation and coldness of the extremities.]

M. BYASSON: "The Action of Salicylic Acid on the Urine" [Salicylate of soda appears in the urine 25 minutes after it has been taken into the stomach, as can be proved by the perchloride of iron test.

A dose of 3 grammes is eliminated in between 36 and 40 hours.

* This is a mistake. Nirvisha is a Sanskrit adjective meaning "not poisonous," and nirvishā or nirvishī is never used of aconite by Hindoo medical writers, but denotes only a peculiar grass, used as an antidote to certain poisons, namely *Kyllingia monocephala* L., according to Rājanātha (in the Cabdakalpadruma). The Hindoo (Sanskrit) names of aconite are: visha ("poisonous"), vatsanābha ("child's navel," from the fancied resemblance), ativishā ("very poisonous"), prativishā ("poisonous"), and upavishā (do.). The modern vernacular names are: Kath-Bish (or Bikh) in lower Bengal; Mitha-Bish at Ducca; Mitha-Teelia in the North-West Provinces; and Dakra in Behār.—ED. N. R.

In its passage through, a portion is eliminated unchanged, the remainder is transformed into salicine, salicyluric acid, and probably oxalic acid.

The first urine passed several hours after taking 2 or 3 grammes of salicylate of soda deviates the plane of polarization to the left; this deviation is due to salicine.

Salicylate of soda augments the proportion of azotized substances and uric acid in the urine.]

I. L. PREVOST: "The mutual Antagonism of Atropine and Muscarine." [The author concludes, as the result of experiments upon cats, that the antagonism of atropine and muscarine is mutual, and that, if given in large enough doses, muscarine will produce its poisonous effects upon animals under the influence of atropine, a fact which hitherto has always been denied.

His experiments were made with regard to the antagonism only of the two poisons, and he is not prepared to affirm that muscarine is an antidote to atropine even in a large dose, although atropine is an antidote to muscarine in a small dose.]

M. GUBLER: "Diuretic Properties of Caffein and Digitalis." [The author states that in organic diseases of the heart, the bromhydrate or citrate of caffein will produce a more profuse diuresis than digitalis.

He administers the bromhydrate hypodermically in doses of 50 centig. without causing any irritation of the cellular tissue; diuresis is almost instantaneous, whereas with digitalis it does not begin until about the third day. He believes that digitalis should not be given more than five days consecutively, on account of its accumulative action. He is in the habit of prescribing the tincture in doses of 20 drops, until the pulse becomes normal, after which he diminishes the dose.]

W. L. LANE: "The Action of Nitrite of Amyl in the Anæsthesia of Chloroform." [As the result of numerous experiments on kittens, the author draws the following conclusions:

Nitrite of amyl inhaled in small quantities produces redness of the nose and mouth, which is due, according to Brunton, to the dilatation and distention of the arterioles.

Inhaled in large quantites it produces cyanosis of the nose and mouth, and at the same time causes anæsthesia; the cyanosis is the result of hyper-distention of the engorged arterioles forcing the blood into the veins; the anæsthesia is caused by hyperæmia of the venous system and of the heart.

Inhaled in small quantities it arrests the anæsthesia of chloroform by dilating the arterioles of the brain, and thereby removing the cerebral anæmia due to chloroform. Inhaled in large doses, instead of arresting the anæsthesia of chloroform, it not only prolongs it, but it may be the cause of death from paralysis and hyper distention of the heart and engorgement of the venous system. Inhaled in small doses it increases the temperature, in large doses it diminishes it.]

MLLE. Z. OCOUNCOFF: "The Employment of Ether Hypodermically." [Injected hypodermically in doses of 1 to 4 grammes, ether acts as a tonic and excitant. It produces the following phenomena: elevation of temperature, augmentation of arterial pressure, augmentation of all the secretions, agitation, hyperæsthesia of the senses and of the skin, and dilatation of the pupil.

In the opinion of the author its employment is indicated in cases of prostration and of coma, and in all cases where there is an enfeeblement of the system. In cases of surgical and puerperal hemorrhage, it is as expressly indicated as the transfusion of blood.]

Repertoire de Pharmacie. Nos. 22–23.

"On a so-called German Sulphate of Quinine." [The Italian market is supplied with a product bearing the name of 'Sulfate de Quinine d'Allemagne de la fabrique de Paul Clary' (German sulphate of quinia, manufactured by Paul Clary),* which is sold at 300 francs per kilo, while the pure alkaloidal salt is worth 540 francs per kilo. This spurious substance differs from the genuine by being very soluble in water, and is according to all appearances—although the author does not state so—muriate of cinchonia. The same fraud is also practised in France.]

* No such firm is known in Germany.—ED. N. R.

Pharm. Zeitschrift f. Russland. Nos. 21–22.

A. SCHWALM: "Adulterated Oil of Almonds." [Reports having met with fixed oil of almonds, which was adulterated with at least 50 per cent. of another oil insoluble in alcohol.]

Zeitschrift d. Oester. Apoth. Vereins. Nos. 32–35 and 1878, Nos. 1–2.

T. F. HANAUSEK: "On Fruta de Burro." [This is, according to Dr. Ernst, the fruit of *Xylopia longifolia*, Alph. D. C., known as the (long-leaved) Bitter-tree, from Guyana. The fruit enjoys great reputation all along the Orinoco as a febrifuge. Nearly all members of the family Anonaceæ, to which it belongs, contain bitter or aromatic principles; and the fruit in question has a distinct peppery taste, somewhat resembling pimento. The name "Fruta de Burro" is, however, also used to denote the fruits of *Capparis frondosa* L., and *C. pulcherrima* Mill., which are regarded as very poisonous.]

T. F. HANAUSEK: "Caoba Fruit." [This is the fruit of the mahogany tree (*Swietenia Mahogani* L., nat. fam. Cedrelaceæ), consisting of a five-celled capsule, which on drying splits up into its single parts. The seeds contain a purging oil, called *Carapat-oil*, and a peculiar substance, of persistent bitter taste. The bark of the tree has been used, under the name of *Amant-bark*, as a substitute for cinchona bark, and is even said to have been used as a fraudulent adulteration of the latter.]

E. BERTHERAND: "On the Therapeutic Effect of the Musk of the Gazelle." [The author has obtained specimens of the excrements of the North-African gazelle, *Antilope Dorcas*, L., which is found in large herds all over the Sahara and neighboring districts. The dry excrements have a strong musk odor, and the author has found that they possess an effect, equal to genuine musk, in allaying hysterical attacks, etc. Mr. Jacquème, of Marseilles, examined them and found them to contain 7 per cent of matters soluble in alcohol, 3.10 per cent soluble in water, 26.5 per cent in soluble mineral constituents, and 63.4 per cent undigested vegetable chaff and grits. The portion soluble in alcohol, which contains bile-acid, bile-coloring matters, a resin, and an acid resembling benzoic, is the most valuable.]

Revista Farmaceutica. 1877, 12.

PARODI: "Vandellia Diffusa." [*Vandellia diffusa*, L. nat. fam. Scrophulariaceæ, native of tropical America growing in arid fields, is used as a prompt emetic, in the form of an infusion of the fresh plant. The dose as an emetic is 1.5 grammes; in smaller doses the effect is purgative.—

The native names are Caa-Ataya, Mata Canna, Purga de Joâs Paez, Orelha de Rato.—Ed. N. R.]

Berichte d. Deutschen Chem. Gesellschaft. No. 18.

F. KRAFFT: "The Distillation of Castor Oil in Vacuo." [On distilling castor oil by itself under very low pressure (almost in vacuo), a colorless oily distillate is obtained, amounting about to one-half of the original oil employed, and a small quantity of a watery liquid. The residue in the retort solidifies to a spongy saponifiable mass. The distillate consists nearly one-half of *œnanthol*, which may be obtained perfectly pure by drying and several rectifications in vacuo; this process being by far the best for the preparation of this body. The other products of the decomposition are a peculiar fatty acid, and some other bodies, which require further study.]

Droguisten-Zeitung. Nos. 45–52, Nos. 1–2.

G. HARLING: "Adulteration of Saffron." [Reports having received an invoice of saffron, ordered as prime, which contained nearly 33 per cent of vegetable fibres or grass-blade fragments impregnated with a coloring matter resembling saffron.]

Polytechnisches Notiz-Blatt. No. 23.

"Infection produced by Books." [Attention has lately been directed to a method of carrying infection which is not commonly thought of. It is the handling of books obtained from circulating libraries, which are often in the hands of the sick, and have lately again been distinctly traced as the carriers of disease, particularly small-pox.]

Pharmaceutische Centralhalle. Nos. 48–52.

HAGER: "The Testing of Wax." [The following method may be employed as a *preliminary* test for the presence in wax of paraffin or ceresin. Put about 2 gm. of the wax and 5 cc. of solution of sodium carbonate into a test-tube, heat until the wax is melted, mix the contents by brisk shaking, and add gradually about 6 cc. of *coal-tar* benzine. This produces a sort of emulsion, which is to be placed for an hour into a water-bath of about 50° C., to permit the different layers to quietly separate. The test-tube is then removed and allowed to cool at ordinary temperature. In the case of pure wax, after cooling, the supernatant benzole-layer is liquid and scarcely turbid; but in the presence of paraffin or ceresin (ozokerit) this layer is *not* liquid, and has an opaque or white color. Whenever the benzole-layer is observed to remain liquid, the wax may be presumed to be free from either paraffin or ceresin.]

H. SKRAUP: "On Cinchonia." [The author has found that, if the alkaloid be recrystallized a great number of times from alcohol, its composition differs essentially from the formula assigned to it at present, namely, $C_{20}H_{24}N_2O$. Numerous analyses of various fractions of the free base and of different salts show that Laurent's original formula, $C_{19}H_{22}N_2O$, is the correct one. Those fractions of the alkaloid which were more easily soluble in alcohol, were found to resist the action of potassium permanganate better than the less soluble ones, which crystallized out first. By fractional precipitation and crystallization of the tartrates a new base was thus obtained, corresponding to the formula $C_{15}H_{24}N_2O$.]

L'Union Pharmaceutique. No. 12.

VALENTIN: "Ferrous Iodide as a Reagent for Fuchsine." [On shaking a dilute solution of fuchsine with ether, the latter separates entirely colorless, being unable to dissolve this aniline color *per se*. But on adding to the mixture some ferrous iodide, and again shaking, the ether abstracts the whole of the coloring matter. The ethereal solution on evaporation leaves behind an amorphous greenish substance, with metallic lustre, soluble in alcohol and chloroform, but much more so in ether to which it imparts an intense violet-purple color. This substance is a compound of fuchsine and iodine. Since wine does not yield its *natural* color to ether, not even in presence of ferrous iodide, this test will infallibly detect any fuchsine present.]

Archiv der Pharmacie. December.

DUNIN VON WASSOWICZ: "On the Color-Reaction between Chloral Hydrate and Oil of Peppermint." [A few years ago, Dr. C. Jehn stated that oil of peppermint imparted a red color to chloral hydrate. This statement has been partly denied and partly repeated by others. The author has therefore subjected the reaction to a new investigation, and finds that *pure* hydrate of chloral mixed with *pure* oil of peppermint of *any* origin (German, English, French and American), produced, after 5 minutes' standing, no reaction whatever, except in the case of the American oil, which yielded a light violet tint, and of a German oil, which gave a yellowish-brown color. The tints increased after standing for an hour, and especially after warming. *English* (Mitcham) oil, however, imparted no color whatever under any circumstances. On the other hand, impure chloral hydrate, containing other chlorine compounds, produces at once decided reddening, from rose-red to mahogany-brown; the English oil, however, even in this case *at most* assumes a bright-red tint, all others being darker.]

BIBLIOGRAPHY.

THE SCIENCE AND ART OF SURGERY. Being A Treatise on Surgical Injuries, Diseases, and Operations. By JOHN ERIC ERICHSEN, F.R.S., F.R.C.S., etc. Revised by the Author from the Seventh and Enlarged English Edition. Illustrated with 862 engravings on wood. Philadelphia: Henry C. Lea. 1878. Two volumes, 8vo (6x9 in.), pp. 947 and 989.

THE author, in his preface to this edition, says that he has endeavored to make it "more deserving than those which preceded it have been, of the favor that has been accorded to them by the Surgical Profession of the United States of America," to whom he dedicates the volumes.

Without making changes in the general arrangement of the various subjects, the author claims to have revised the entire work and added much important matter. This has been done throughout the work, and not in particular parts. To accomplish this, matter that has become obsolete has been cancelled. Many new illustrations have been added, some of which from nature were made for this edition.

It would be impossible for us now to give anything like an adequate review of the opinions and methods of the author; and, indeed, it is not required, for Mr. Erichsen is already familiarly known either personally or as an eminent authority by nearly every American surgeon—and his statement that he has spared no effort to bring his work up to the present state of our knowledge needs no indorsement. The publishers have done their part in an unexceptionable manner, and can share with the author the laudable pride which may follow the completion of such a work.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION at the Twenty-fifth Annual Meeting, held in Toronto, Ont., September, 1877. Also the Constitution, By-Laws, and Roll of Members. Philadelphia: Published by the Association. 1878. 8vo (6x9 in.), pp. 647.

CLOSE upon the meeting follows the publication of this valuable report. To those who are familiar with its predecessors, this volume needs no recommendation, and those who have not yet had an opportunity for becoming acquainted with the Publications of the Association have yet to see a very creditable piece of work. The admirable "Report on the Progress of Pharmacy" (only a few preliminary pages of which were read at the meeting by C. Lewis Diehl, the reporter) covers 331 pages. We recognize many of the articles and illustrations as having appeared in our own columns during the year, and thoroughly appreciate the compliment which is implied. The reports of Committees occupy the next 60 pages; Special Reports and Essays, 77 pages more; and the detailed minutes of the meeting, and the constitution and by-laws, and roll of members follow. A portrait of Charles T. Carney (deceased) forms a frontispiece, and will be a welcome memento to his former friends.

MEDICINAL PLANTS; Being Descriptions with Original Figures of the Principal Plants Employed in Medicine, and an Account of their Properties and Uses. By ROBERT BENTLEY, F.L.S., and HENRY TRINSEN, M.B., F.L.S. Philadelphia: Lindsay & Blakiston. 1877. Price, $2.00 per part.

TWO-THIRDS of this work have now been published, and there is no diminution either in the excellence of the plates or the comprehensiveness of the text. Each number contains an illustration of some drug new to most persons in this country, while the plants indigenous to the United States are by no means omitted. Advantage has been taken of the latest sources of information to give the reliable accounts of the natural history of the drugs described; and the text contains a great deal of matter not before collected into such a shape as to render it accessible to the majority of persons interested in the subject.

The parts just received are as follows:

PART 20.—Yellow-root (*Xanthorrhiza apiifolia*); Simaruba (*Simarouba amara*); Frankincense or Luban Tree (*Boswellia Carterii*), the source from which Olibanum or Frankincense is derived; Bay-berry (*Pimenta acris*), from which the officinal bay-rum is made; Allspice (*Pimenta officinalis*); Sumbul (*Ferula Sumbul*), See NEW REMEDIES, August, 1877; Barbados Aloe (*Aloe vulgaris*).

PART 21.—American Elder (*Sambucus Canadensis*); Boneset (*Eupatorium perfoliatum*); Pennyroyal (*Hedeoma pulegioides*); Hor-e-mint (*Monarda punctata*); Spogel (*Plantago Ispaghula*), a drug not previously figured, which is a native of India where it is used, as quince-seeds are with us, for its demulcent properties; Wormseed (*Chenopodium anthelminticum*); Betel-Nut Palm (*Areca Catechu*); *Arenga saccharifera*, the source from which sago is obtained.

PART 22.—Ground-nut (*Arachis hypogæa*); Elder (*Sambucus nigra*); Chamomile (*Anthemis nobilis*); Kaladana (*Ipomœa Nil*), an Indian cathartic closely resembling true jalap; Pennyroyal (*Mentha Pulegium*); Darnel (*Lolium temulentum*); Indian Corn (*Zea Mays*).

HANDBOOK OF THE PRACTICE OF MEDICINE. By M. CHARTERIS, M.D., Professor of the Practice of Medicine, Anderson's College, Glasgow, etc., with illustrations. Philadelphia: Lindsay & Blakiston. 1878. 7½x4½ in., pp. 336. $2.00.

THE book is intended mainly for students, and is therefore somewhat elementary in its character. Good judgment has been exercised, however, in the choice of matter, and the style in which its various sections are written is clear and attractive. The contents includes General Diseases, Diseases of Respiratory Organs, Diseases of the Circulating Organs, Diseases of the Liver, Pancreas and Spleen, Diseases of the Kidneys, Diseases of the Nervous System, Diseases of the Spinal Cord, Diseases of the Skin, and a number of unclassified affections. Excepting so far as it is a matter of convenience, a classification does not appear to have been attempted. A number of pages of formulæ (some 92 in all) are added at the end of the work. A marked feature is the employment of well executed etchings to illustrate certain of the subjects. This work can be recommended as being a very reliable, handy book, and well adapted for ready reference.

ON THE USES OF WINES IN HEALTH AND DISEASE. By the late FRANCIS EDMUND ANSTIE, M.D., F.R.C.P. Reprinted from the *Practitioner*. London: Macmillan & Co. 1877. pp. 74, 5x7 in. $0.75.

THE writings of the lamented Anstie need no recommendation. His work was always thoroughly done, and was probably as free from bias as human nature would permit. On the action of alcohol when taken into the human system he became one of our best authorities, and the republication of these papers, on the Uses of Wine, which he contributed to his journal (*The Practitioner*), will place them within the reach of many to whom the original publication is not accessible. For those who are not already familiar with them, we give the following synopsis of their contents. The Use of Wine in Health is embraced in 41 pages, and comprises a description of 1, Wines as alcoholic fluids; 2, The sugar of wines; 3, The natural acidity of wines; 3, The astringency of wines; 5, The salts of wines; and a synopsis of the properties of various wines. Part II. treats of the uses of wine in acute and in chronic diseases.

PRACTICAL GYNÆCOLOGY. A Handbook on the Diseases of Women. By HEYWOOD SMITH, M.A., M.D., Oxon., etc., with illustrations. Philadelphia: Lindsay & Blakiston. 1878. pp. 205, 5x7½ in. $2.00.

THE author truly says that "of big books on Diseases of Women, there is no end." Without them the details of this important branch of medicine could not be acquired, but there is no question that they fail to give to the practitioner, who has *not* mastered them, the knowledge of the relative importance of various symptoms or conditions which the needs of one in general practice require, and it is not always an easy matter to find in some of them what they really contain. The present work supplies this want in an admirable way. Acknowledgment is made of the author's indebtedness to Dr. Thomas' work for the systematic order of the matter.

The general scope of the work is equal to that of others, in which the details are more elaborated. The descriptions of methods of examining the condition of the pelvic organs are clear and explicit, the few diagrams required, well chosen, and the directions for treatment judicious and reliable.

The book merits an extensive sale among practising physicians, as well as among students.

LANDMARKS; MEDICAL AND SURGICAL. By LUTHER HOLDEN, F.R.C.S., etc. From the Second English Edition. Philadelphia: Henry C. Lea. 1878. pp. 128, 5x8 in. (8vo).

THIS, also, is a very acceptable little book; for after the student has acquired his knowledge of general and special anatomy, as presented to him in the dissecting room, or the plates of his anatomical treatise, he finds himself quite lacking in that sort of knowledge which will enable him to appreciate the relationship of parts in motion, or in the living subject. That this is essential, there can be no doubt, and that it is possessed to any extent by but few, even in the case of surgeons in active practice, is equally true. Mr. Holden's long connection with the Court of Examiners of the Royal College of Surgeons, of England, has placed him in a position to appreciate fully the needs of such a work as this, and the manner of its execution leaves but little to be desired. While it cannot replace the systematic text-books in anatomy, no man's knowledge of the branch can be of much ultimate value to him without the information which he can best acquire through the aid of this or some similar treatise, and he will search some time before he finds a better one than this.

THE ILLINOIS STATE MEDICAL REGISTER, for 1877–78. Published Annually under the Supervision of the Chicago Medico-Historical Society, with the co operation of the Illinois State Medical Society. D. W. GRAHAM, A.M., M.D., Editor. Chicago: W. L. Keener. 1877. pp. 206, 5x7 in.

WE congratulate our friends in Illinois on having such a complete, convenient, and well-made manual.

TABLE FOR THE SEPARATION OF ORGANIC POISONS. By H. B. PARSONS, Assistant in Pharmacy, University of Michigan.

THIS is a convenient tabular arrangement of facts that will prove of value to chemical and pharmaceutical students. It is printed on a card 11x13½ inches in size, and embraces the substances usually embraced in the laboratory course on toxicology.

POINTS IN THE DIAGNOSIS OF HEPATIC AFFECTIONS. By E. G. JANEWAY, M.D., etc. New York: G. P. Putnam's Sons. (No. V. of Vol. III. of A Series of American Clinical Lectures, Edited by E. C. Seguin, M.D.)

THIS series of pamphlets, of which this is the 29th, embraces many choice productions of our best clinical teachers. The present one is 32 pages in extent, and will be found a valuable aid in the recognition of an obscure class of affections.

BEITRAEGE ZUR KENNTNISS DER VERATRUM ALKALOIDE. By ALEXANDER TOBIEN. An Inaugural Thesis. Dorpat: 1877. 8vo., pp. 39.

RECEIVED through the favor of Professor Dragendorff.

ON THE ANTISEPTIC TREATMENT OF WOUNDS AND ITS RESULTS. By ROBERT F. WIER, M.D., etc. A Paper read before the Medical Society of the County of New York, and Republished by the Author from the *New York Medical Journal* of December and January. 8vo, pp. 42.

MALARIA AND STRUMA IN THEIR RELATION TO THE ETIOLOGY OF SKIN DISEASES. By L. P. YANDELL, JR., M.D. Reprint from the *American Practitioner* of January. 8vo, pp. 15.

AT the meeting of the American Dermatological Society in September, this paper was presented by Professor Yandell, and attracted considerable attention. The views which he enunciates are: Malaria is the chief source of acute skin disease. Scrofula is the chief source of chronic skin disease. The more inveterate cases of skin disease are often due to the co-existence of these two things. The specific exanthems are, of course, not included, but Professor Yandell contends that their progress and termination are often largely influenced by the presence of malaria or struma.

A SUCCINCT HISTORY OF THE PLAN OF TREATMENT OF POTT'S DISEASE BY SUSPENSION AND THE USE OF PLASTER OF PARIS BANDAGE. By LOUIS A. SAYRE, M.D., etc. Reprinted from the *Richmond and Louisville Medical Journal*. 8vo, pp. 22.

PROFESSOR SAYRE has been charged with claiming the invention of the dressing for spinal deformity which has of late attracted so much attention, and in this paper he shows that he not only has quite as good a right as any one to do so, but that he is certainly the only person who appreciated the true value of the method, or took any trouble to master its details or make it public.

IS THE HUMAN EYE CHANGING ITS FORM UNDER THE INFLUENCE OF MODERN EDUCATION? By EDWARD C. LORING, M.D. New York: Privately Published. 1878. 8vo, pp. 26.

THIS paper was read before the Medical Society of the County of New York, and is a most valuable addition to the social science of our period.

ON THE TREATMENT OF PSORIASIS BY AN OINTMENT OF CHRYSOPHANIC ACID. By BALMANNO SQUIRE, M.B., etc. London: J. & A. Churchill. 1878. 8vo (5¼ x 8½ in.), pp. 99. *2s. 6d.*

MR. SQUIRE is closely connected with the introduction of the use of goa powder to England and this country, and the present monograph will prove of value to those who would become familiar with the properties of one of the most important remedies within reach of the dermatologist. About half of the work is devoted to a republication of the writings of others on the use of goa powder and its active principle, and furnishes a complete review of the subject, so far as it is now understood.

CERTAIN GENERAL CONSIDERATIONS RESPECTING THE MECHANICAL TREATMENT OF CHRONIC DISEASES OF THE JOINTS, with Especial Reference to the Use of Traction. By L. M. YALE, M.D., Surgeon to Bellevue Hospital, etc. Reprinted from the *Medical Record*, of June 12th, and privately published. 8vo, pp. 16.

NOT only is Dr. Yale possessed of much practical information on the subject, but he is a careful and discriminating observer, and a ready writer. His paper will be found to possess exceptional merits as an addition to "joint literature."

ON CERTAIN POINTS RELATING TO THE NATURE AND TREATMENT OF LUPUS. By HENRY G. PIFFARD, A.M., M.D., etc. Extracted from the Transactions of the Medical Society of the State of New York, 1877.

THIS is by no means the first of Professor Piffard's writings on this subject, and, like others of his papers, it is worthy of careful consideration.

SPINAL IRRITATION IN CHILDREN, as related to True and False Arthropathies. By V. P. GIBNEY, M.D. Reprinted from the Transactions of the American Neurological Association for 1877, and privately published. 8vo, pp. 23.

DR. GIBNEY'S connection with the Hospital for the Ruptured and Crippled has placed within his reach a valuable fund of material, and, it may be said to his credit, that he makes good use of his opportunities. His writings show careful study of cases, industrious research, and knowledge of the subjects under consideration.

CONTRIBUTION TO THE HISTORY OF MEDICAL EDUCATION and Medical Institutions in the United States of America, from 1776 to 1876. Special Report prepared for the United States Bureau of Education by N. S. DAVIS, A.M., M.D. Washington: Government Printing Office. 1877.

THIS is a valuable appendix to the admirable paper of Dr. Toner on the history of medical education prior to the Revolution, and Dr. Davis has well earned the thanks of the profession and the friends of improved medical education. It lacks, however, a great deal of being complete or of giving even an adequate general review of the field. It may, however, serve as a basis for subsquent elaboration by some one, whose opportunities for research will be greater than we presume Dr. Davis' to have been.

STATEMENT OF THE MANUFACTURING CHEMISTS' ASSOCIATION OF THE UNITED STATES, addressed to the Committee on Ways and Means. Washington City, 1878.

THE Congressional Committee who have in preparation a new tariff have in this pamphlet a valuable assemblage of facts. We also recommend its perusal to the members of those medical associations who during the past year have adopted resolutions in regard to proposed modifications of our tariff law.

TRANSACTIONS of the State Eclectic Medical and Surgical Society of Michigan. For the year 1877.

A WELL-MADE and valuable report which, aside from a rational and commendable address by the President, V. A. Baker, M.D., and a short paper by H. L. Baker, M.D., on Carbolic Acid as a Surgical Dressing, is composed of the minutes of the meeting and a reprint of the Act of Incorporation, Constitution and By-Laws, etc.

PROCEEDINGS of the Fourth Annual Meeting of the Oregon State Medical Society. Held at Salem, June 11th, 12th and 13th, 1877. Published by the Society. 8vo, pp. 82.

BESIDES the usual minutes, the report comprises the Address of the President, W. H. Watkins, M.D., Report of Cases from St. Vincent's Hospital by R. G. Rex, M.D., and a report on Medical Topography and Climatology, by W. B. Cardwell, M.D.

TWENTY-SECOND ANNUAL REPORT of the Woman's Hospital in the State of New York. 8vo, pp. 90.

ABOUT half of the report is occupied with an exceedingly valuable tabular statement by John N. Beeckman, M.D., the Pathologist of the Hospital, showing all the cases treated in the hospital from its foundation, with an analysis of the results of treatment.

Chloral Hydrate a Poison.—The British Privy Council has sanctioned the addition of chloral hydrate and its preparations to the poison schedule under the Act of 1868.

M. Eugene Lebaigne, who for five years has been the editor of the *Répertoire de Pharmacie et de Chimie*, has become the proprietor, as well, of the journal.

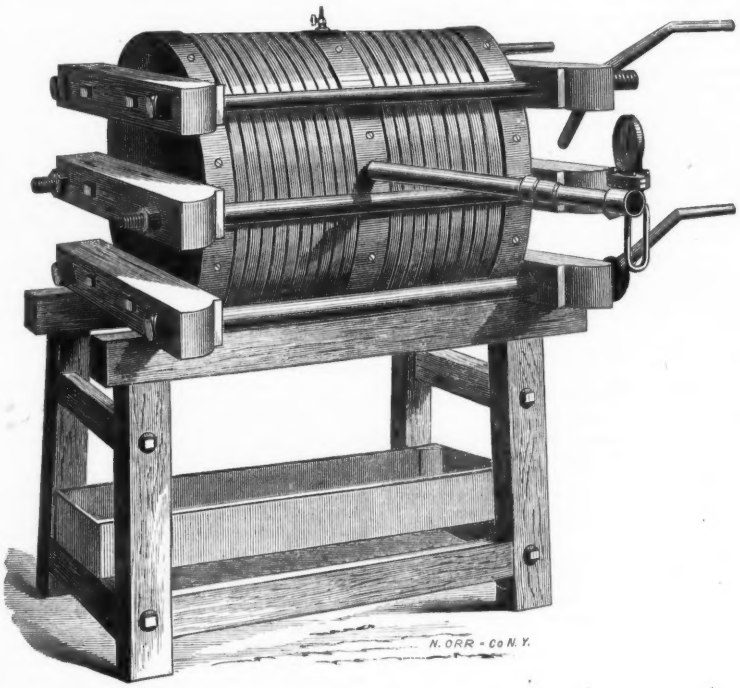
Distilleries Registered and Operated in the United States.—The Commissioner of Internal Revenue reports that during the fiscal year ending June 30th, 1877, 4,952 grain, molasses, and fruit distilleries were registered, and 4,510 were operated. On the 1st of January, the number of grain and molasses distilleries in operation was as follows: grain, 268; molasses, 7; of which the total capacity of production was 231,133 gallons daily.

The Imported Alcohol consumed in this country in the manufacture of perfumery for exportation is stated by the Commissioner of Internal Revenue to be 2,500 barrels annually.

TRADE NOTES.

Bowing's Patent Filter-Press.

ON page 248 of our last volume we described the filter-presses of Wegelin and Huebner, of Halle, which have proved of great benefit to those who are obliged to filter rapidly and effectively considerable quantities of material. We now present an engraving of a press patented in this country by Mr. John Bowing, for whom Mr. C. B. Norton, 25 Astor House, New York City, is agent, and which appears to excel the press before referred to as regards simplicity of construction, capacity for work, and ease of manipulation. The main difference is this: that in the press of Wegelin and Huebner the material is strained, under



pressure, through layers of porous material. In the apparatus of Bowing, the following is the construction and mode of working: a series of hoops are placed side by side, thin discs of sheet metal of the same diameter as the hoops being interspersed between them. There are openings in the central portion of these discs which allow fluids to pass freely from one compartment to another, and on each side of every disc is placed a covering of filtering material in the shape of canvas, cloth, linen, sacking, calico, felt, matting, wire-cloth, or other suitable fabric. This filtering material does not need to cover the central part of the disc, but must form an unbroken packing between the rings and the discs. The parts described having been put into place, the end-pieces and clamps, shown in the illustration, are fastened, and the material to be filtered is forced in through a pipe (also shown) and fills the chambers by passing through the slots or openings in the discs. The chambers being filled, the fluid portion with the soluble matters commence to ooze through between the rings and discs, being obliged in their course to traverse the filtering material, and fall into the trough or other receptacle placed below. The numerous uses to which such an apparatus can be applied suggest themselves to every practical pharmacist. They can be made with hoops several feet in diameter for the filtration of water, sewage, brewery slops, etc., or in smaller form of glass for domestic use and for the filtration of tinctures, fluid extracts, etc.

Dr. Carman's Anatherin.

THIS is a novelty in the way of a dentifrice prepared by M. A. Carman, a dentist in Canandaigua, N. Y., and consists of a vial of wash, for daily use, and a powder to be employed occasionally. The peculiar feature is the package (Patented Nov. 27, 1877), which is very convenient and well adapted for travelling as well as home use. The bottle is contained in a pasteboard box, the top of which is high enough to admit of a false bottom being introduced, so as to form another box, which contains the powder. On removing the top of this one, a tin cap is uncovered having a central orifice, through which, by reversing this upper box, the powder can be shaken in quantities such as may be required. The nature of neither dentifrice is given, although the proprietor vouches for the absence of any harmful ingredient. The price is 50 cents per bottle, or $3.50 per doz., and McKesson & Robbins are the agents.

Shaw's Fragrant Antiseptic Cologne and Medicated Cosmetic Lotion.

THIS, we are informed by the proprietor, is made with a view to carry out the suggestions contained in the paper on "Cologne for the Sick-Room," read by Mr. Geo. Lies, at the meeting of the *Am. Pharm. Assoc.* in 1876; the active principle being salicylic acid. We find the preparation to be an *exceedingly* agreeable and useful one, but we can hardly agree to the claim made for it on the wrapper, by the manufacturer (Mr. W. W. Shaw, of 16 and 18 Rose St., N. Y.), that it is "indorsed by every regular medical practitioner in the world," that it is "unequalled by any other known agent for preventing diseases by contagion, and for instantly dispelling offensive odors." A more modest claim might, in the end, be more to his advantage.

"Parvules."

THE demand for a form in which active remedies can be administered in small but accurately divided doses, has led to the manufacture, by William R. Warner & Co., of Philadelphia, of little pills 4 millimetres in diameter, and weighing about 20 to the gramme each; and which, in order to distinguish them, are called "Parvules." In addition to the peculiarity of size, they have an external red coloring, and cannot, therefore, on account of size be confounded with homœopathic pellets, which they resemble in no other particular. The recent writings of Drs. Dessau and Piffard, of this city, have directed increased attention to the advantages which may be derived in some cases from administering remedies in smaller doses and shorter intervals than has heretofore been customary; and these preparations of Messrs. Warner & Co. leave hardly anything to be desired in the way of a method. The list of remedies offered in this form at present exceeds thirty, and the amount in each pill varies from $\frac{1}{8}$ of a grain, in the case of arnica flowers and bromide of potassium, to the $\frac{1}{100}$ of a grain in "parvules" of arsenious acid, tartar emetic, iodide of arsenic, and arsenite of potash. One hundred are contained in a strong vial of the capacity of $1\frac{1}{2}$ fluidrachms, and cost 40 cents, or less for quantities. There is little doubt in our mind that the method of using remedies referred to, is worthy of much greater attention than it has yet received; and the enterprise of this well-known house in providing the means whereby it is rendered practicable is worthy of commendation.

Paraffin Paper.

A VERY handsome quality of this useful water- and acid-proof paper may be had of J. H. Simpson, 667 Sixth Avenue, New York City, either white, colored or manilla, in sizes ranging from 10x15 to 15x20 in., and in price from $1.00 to $2.50 per ream. Discount for quantities.

Blatta Orientalis.

THE employment of the Russian Cockroach as a remedy in uric varieties of dropsy has already attracted considerable attention, and been noticed in our columns. Those who have any desire to make a trial of it, can now obtain it of Lehn & Fink, 160 William St., who have just received a supply.

Prize Announcement.—The Prussian government has offered a prize of 10,000 Mark ($2,380) for the best process of making plastic copies of works of art. The composition desired must possess all the advantages of plaster of Paris, but must in addition be water-proof so as to stand washing. Its color may be from white to yellowish or reddish, but must be uniform. Applicants must submit their process on or before December 1st, 1878, together with specimens. The names of the applicants are required to be inclosed in a sealed envelope, the outside of which bears the same motto as the document containing the process.

Threatened Poisoning of the Rhine.—Toward the end of the past year the screw steamer "Schelde und Rhyin," having on board 656 casks of arsenic (arsenious acid), foundered in the river Rhine near Engers. Great fear was entertained lest the poisonous cargo might be penetrated by the water, and destroy the lives of the animals and of inhabitants along the river below the place of the accident. The boat and cargo were raised with as little delay as possible, and only 5 of the casks were found to be damaged by water, none of them having lost any considerable portion of arsenic. The consequence of the collapse of all the casks and the mixture of their contents with the river would have been most disastrous.

British Trade-Marks.—Up to the end of last year 8,888 trade-marks were registered under the recent laws, 480 of which were for chemicals used in medicine and pharmacy. Fermented liquors comprised the greatest number.

ANALYSES OF PHARMACEUTICAL CHEMICALS AND PREPARATIONS.

We are now prepared to send samples for the April prize to such as may desire to compete for it. Answers must be received before the 20th of March, and be accompanied by a sealed envelope containing the name of the writer, and designated by a device or motto, which is also to be placed, instead of the writer's name, upon the report of the analysis.

Persons to whom a prize has been awarded are requested to send to the publishers the title of any book or books they may desire, not exceeding in the aggregate the value of $10.00.

The prize this month is to be equally divided between E. B. STUART, *of Chicago* ("*Mercury*"), *and* THOMAS M. NEWBOLD, *of Philadelphia* ("*Bob Sawyer*").

THE February sample consisted of commercial sulphate of cinchonia $(C_{20}H_{24}N_2O)_2\ H_2SO_4.H_2O$ (Storer's Dict. Sol.). Powers and Weightman report that their sales of cinchonidia sulphate from April to September last were double those of quinia sulphate, and many physicians are prescribing the sulphates of the three cheaper alkaloids, quinidia, cinchonidia, and cinchonia, in place of quinia sulphate. The reasons for this change of practice are various, but may be summarized in two. Firstly: the best medical authorities concede that the cheaper alkaloids have a therapeutic value nearly equal with quinia. If quinia sulphate be taken at par, 100, quinidia sulphate is 95, cinchonidia sulphate is 90, and cinchonia sulphate is 75 (Proc. Mich. Phar. Ass'n, 1877, p. 32).

Secondly: the cost of quinia sulphate is out of proportion to its therapeutic value; it sells for twice as much as quinidia sulphate, four and one-half times as much as cinchonidia sulphate, and nine times as much as cinchonia sulphate.

That some unprincipled wholesale and retail dealers are daily substituting the cheaper alkaloids for quinia in prescriptions, is a fact well known to the writer; also, that many of the scale preparations, pills, elixirs, etc., are deficient in quinia, which is usually replaced by cinchonia, has been repeatedly proven. It is important, therefore, that pharmacists, who wish to sell a patient *what is prescribed*, should be able to make an accurate qualitative analysis of the cinchona alkaloids.

In the present paper will be given the method of De Vrij, which is probably the best, for the detection and separation of the cinchona alkaloids. The present sample may be proved a salt of a cinchona alkaloid by "Glahe's Test" (N. R. vi., p. 251).

There are five alkaloids in the various cinchona barks; for symbols see N. R. vi., p. 300. Quinamia, which is there named, has not as yet become an article of commerce, hence it is hardly necessary to examine the other alkaloids for its presence, yet it is safer to do so.

The sulphates of quinidia and cinchonidia bear quite a resemblance to ordinary quinia sulphate, while cinchonia sulphate is so different in appearance as to deceive no one.

The formulæ for the commercial sulphates are, according to Storer's Dict. Solubilities and later reports:

Quinia Sulphate $(C_{20}H_{24}N_2O_2)_2\ H_2SO_4.\ 7\frac{1}{2}$ (or 8) H_2O.
Quinidia Sulphate $(C_{20}H_{24}N_2O_2)_2\ H_2SO_4.\ 3\ H_2O$.
Cinchonia Sulphate $(C_{20}H_{24}N_2O)_2\ H_2SO_4.\ H_2O$.
Cinchonidia Sulphate $(C_{20}H_{24}N_2O)_2\ H_2SO_4$.

The solubility in water of the above sulphates is: cinchonia, 50 parts; cinchonidia, 130 parts; quinidia, 350 parts; quinia, 700 parts. They are all quite soluble in alcohol, practically insoluble in ether. Quinidia sulphate dissolves in 19.5 parts absolute chloroform (Hesse), and cinchonia sulphate in 60 parts, while the other sulphates

require 1,000 parts. All these sulphates form acid sulphates, freely soluble in water, by use of a little dilute sulphuric acid.

With these facts and those given in N. R. Oct., 1877, p. 300, we are prepared to understand the process of De Vrij, which will be given in a slightly modified form.

Weigh out from one to two grammes of the alkaloidal sulphate, place in a small flask and treat with one fluidounce of water, agitate, and then dissolve by use of dilute sulphuric acid. Precipitate by dilute solution of sodic hydrate. Potassic or ammonic hydrate redissolve more or less of the alkaloids and should not be used. While adding the sodic hydrate, agitate the flask so that the alkaloids may not form a sticky mass. Filter. The precipitate contains the free alkaloids. Wash with several small portions of water; much washing wastes considerable quinidia and quinia. Dry the precipitate carefully by a heat not above 100°C. When well dried, weigh, and treat in a wide-mouth bottle or flask with ten times the weight of the residue of *water-washed* ether.* Cork the bottle and set aside in a cool place for one or two hours; filter, and wash the residue once with half a drachm of ether.

Soluble in ether (*a*). Insoluble in ether (*b*).

I. Evaporate ethereal solution (*a*) carefully to dryness, dissolve in a mixture of three measures of water, and four of alcohol containing a very little sulphuric acid.

To this solution add, drop by drop, tincture of iodine; the *compound* tincture, which contains also potassic iodide, should not be used. If any precipitate is formed, set aside the beaker until it separates well, then filter. Precipitate, 1. Filtrate, 2.

Wash precipitate 1 with a very little cold alcohol, then dissolve it in hot boiling alcohol, and evaporate to a small bulk. Set aside over night that crystals of "Herapathite" may form. The formation of herapathite is evidence of *quinia*: its composition is, according to the Pharmacographia, 4 $(C_{20}H_{24}N_2O_2)+3\ H_2SO_4+6\ I+3\ H_2O$.

This contains 53.8 per cent of anhydrous quinia equal to 56.7 per cent of the monohydrate $C_{20}H_{24}N_2O_2.H_2O$.

Filtrate 2 is decolorized by q. s. of sulphurous acid, the alcohol expelled by careful evaporation on the water bath, and the remaining water solution precipitated by sodic hydrate. This precipitate is either quinamia or the amorphous alkaloids produced by overheating quinia or cinchonia. These alkaloids are quinicia, $C_{20}H_{24}N_2O_2$, and cinchonicia, $C_{20}H_{24}N_2O$. Both are soluble in ether; neither can be crystallized nor made to form crystalline salts. Quinidia gives the thalleioquin reaction; quinamia and cinchonidia do not. Quinicia and cinchonicia form a considerable part of "chinoidin."

II. Dissolve the portion insoluble in ether (*b*) in a small amount of water containing a little sulphuric acid, and make the solution *exactly neutral* to litmus papers by adding dilute sodic hydrate. No precipitate should occur. If too much sodic hydrate is added, dissolve the precipitate by very dilute sulphuric acid, being careful to again make the solution exactly neutral. To this solution add solution of potassic iodide, and set aside for twelve hours. If any crystalline precipitate forms, it is quinid a hydriodate $C_{20}H_{24}N_2O_2.HI$, and contains 71.6 per cent quinidia.

To the solution, after removal of the quinidia, add solution of "Rochelle salt, $KNaC_4H_4O_6$, and set aside several hours that crystals may form. If formed, they are cinchonidia tartrate $(C_{20}H_{24}N_2O)_2H_2C_4H_4O_6$, and contain 80.4 per cent of cinchonidia. To the filtrate from these crystals add sodic hydrate in excess, wash the precipitate well with cold water, dry, and weigh as cinchonia, $C_{20}H_{24}N_2O$.

The above process may be made to give quite accurate quantitative results if proper precautions are observed, viz.: be careful to use no more than ten parts of washed ether or some quinidia and cinchonidia will be dissolved with the quinia; be very careful to have the solution neutral before adding potassic iodide; do not allow the solution to become very dilute; and never use a higher heat than 100° C.

The presence of quinia or quinidia may be inferred if the salt shows a blue fluorescence when dissolved by aid of dilute sulphuric acid. This fluorescence is more marked in moderately dilute solutions, and is said to show one part of quinia in 500,000 (Regnault), to be less delicate for quinidia and to be destroyed by hydrochloric acid.

The thalleioquin reaction (N. R. vi,, p. 349, will show one part of quinia or quinidia in 5,000, or if bromine is used in place of chlorine, one part in 20,000.

Quinia is precipitated, crystalline, from slightly acid solutions by ammonic oxalate, quinidia is not so precipitated. This reaction is employed in two tables already published; see *Am. Jour. Phar.* 1875, p. 3, and *Phar. Jour. and Trans.*, June 2d, 1877, p. 990.

The precipitation as tartrate is characteristic of cinchonidia. For cinchonia no really good distinctive reactions are known, unless we except the action of potassic sulphocyanide which forms distinct crystals, which are figured in Proc. Amer. Phar. Ass'n, 1875, p. 410; these crystals are to be examined by the microscope. Quinia and quinidia also form crystals easily identified.

The present sample, when examined as has been explained, gives slight tests for quinia and cinchonidia, none for quinidia; it also contains a little coloring matter from the bark, and leaves on ignition a slight ash containing lime. It is as pure as requir d for any medicinal use.

It would be an excellent drill for every druggist or clerk to examine the cinchona alkaloids he sells. Much additional information as to their characteristics may be found in text-books and in back numbers of NEW REMEDIES.

"*Avena.*"—This sample contained only a slight trace of quinia. A test may be obtained by precipitating the total alkaloids by NaOH, treating them with ether and evaporating. Treat this residue with a little chlorine water, evaporate to dryness, and add a drop of ammonia. A green residue indicates either quinia or quinidia; potassic iodide gives no evidence of quinidia; hence quinia is present. This explains the fluorescence in acid solution. The sample contained no *morphia*.

"*Bob Sawyer.*"—There was only a *trace* of cinchonidia in the sample.

"*Mercury*," and "*Joe.*"—The sulphocyanide reaction probably indicated cinchonidia. Try the same with known materials. Your work is good, but hardly goes far enough.

The March sample is thought to have been put up by your rival, "The New Druggist around the Corner." Some bad effects followed its use, but he claims that it is sulphate of quinia. What is the sample?

The analyses of "*Mercury*" and "*Bob Sawyer*" were of equal merit, and the prize will, accordingly, be divided equally between the two contestants.

Troy and Avoirdupois Weight.—A lengthy discussion has recently been published in the *Pharm. Jour. and Trans.* in regard to the signification of characters in common use. It has, however, been practically settled by the statement of Professor Redwood, who has explained that the sign ℔ should always represent the Troy pound; that lb. represents the avoirdupois pound. ℥ stands for the Troy ounce (480 grains), and oz. for the avoirdupois ounce (437½ grains).

Henry Daniel Ruhmkorff recently died in Paris, aged 74. He was born in Hanover, and in 1844 brought out his first invention, a thermo-electric battery. In 1861 he produced the splendid instrument with which his name is connected, called the Ruhmkorff Coil. It acquired European fame, and was, we believe, the chief attraction at a conversazione given by Mr. Peter Squire. For this invention he was rewarded by a medal and decoration at the Exposition of 1855, and in 1858 he received the prize of 50,000 francs (2,000*l.*) at the French Exhibition of Electrical Apparatus.

* Water-washed ether is prepared by shaking common ether with about half its volume of water, and removing the upper layer for use In this way ether is freed from alcohol and saturated with water: its sp. gr. is about .983.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

Preservation of Fruits (A. S., Utica, N. Y.).—Glycerin may be used to preserve fruits; at least, we have seen this method recommended. It is necessary to use pure glycerin mixed with from two to four times its volume of pure water, and to prevent the rising of the fruits above the surface of the glycerin by weighting them down, best with strips of glass.

Absinthe (Dr. Ch. A. F., Montreal).—The French liquor which bears this name is prepared from the tops of wormwood (*Artemisia Absinthium* L.), angelica root, star anise, and marjoram, by macerating and crushing a mixture of these subtances in alcohol of 60—70 per cent, and after adding 1 gramme of essence of anise for each litre, distilling off the alcohol. If well prepared from fresh ingredients, the distillate has a bright-green color; unfortunately, however, this does not always happen; and, in this case, the manufacturer generally adds indigo and some yellow color as turmeric, sometimes also acetate or sulphate of copper, which intensifies the deleterious effects of the liquor. Antimonious chloride has also been used in its preparation. The evil result of the habit of drinking absinthe are no doubt well known to you.

To Sweeten Rancid Butter (F. R. D., Plattsburg, N. Y.).—Melt the butter in a water-bath with some fresh-burnt and coarsely powdered animal charcoal, which has been thoroughly freed from dust by sifting, and strain it through clean flannel. Another method, less troublesome and said to be more effective, is to wash the butter first with fresh milk, and next with good spring water. Butyric acid, on the presence of which the rancidity depends, is freely soluble in fresh milk. Still another method is to add to ten pounds of butter 25—30 drops of a saturated solution of chloride of lime, agitating briskly, and then carefully to wash the butter with pure water.

Indelible Ink (W. W. A., Buffalo, N. Y.).—An ink which is under all circumstances indelible can hardly be said to exist. The best indelible inks, so called, are those depending on the reduction of nitrate of silver to the metallic state, or on the carbonizing action of sulphuric acid. We may recommend the following formulæ:

1. Dissolve 1 drachm of carmine in 1 fluidounce of water of ammonia, add to it 30 grains of silver nitrate, and apply the solution with a clean quill pen to the fabric. Let it dry thoroughly, drench the spot with a little oil of turpentine, then wash it.

2. Dissolve 30 grains of sugar in ½ drachm of water, saturate with it the spot on the fabric which is to be marked. Then, having laid it upon a moderately warm place, and having waited until it is thoroughly dry, write upon it, somewhat rapidly, the desired name or design, by means of a gold pen, with strong sulphuric acid. As soon as the marks have assumed a dark-yellow color, plunge the spot into water, and wash it. It will assume a black appearance after a while.

This last method is recommended highly in some foreign works; but we have no practical experience with it. Hence, we would recommend to our readers to be careful in following the directions.

3. There is, however, another method to produce black indelible ink; namely, by means of a vanadium salt. Prepare a solution of 0.8 grammes of aniline hydrochlorate and 0.35 or 0.40 grammes of potassium chlorate in 10 grammes of water; dissolve in the solution 0.5 gm. of isinglass, and saturate with it the spot of the fabric to be marked. Then write upon it the desired name with a concentrated solution of vanadious chloride, or of ammonium vanadate. After a short time the writing will appear in beautiful black (being an aniline black), which is said to be altogether indestructible.

Bitter Wine of Iron (Ch. A. P., New Orleans, La.).—Before we can answer your query about the blowing out of the cork intelligently, we would prefer that you describe to us your method of preparing it. We suspect there is a cause, but do not like to grope in the dark.

Caffein (X. Y. Z., Boston, Mass.).—Caffein may be sublimed by careful heating on a sand-bath, at a temperature of 177° C. (350° F.). We do not know the particular process by which the firms you mention manufacture their caffein.

Extract of Musk (A. D., Ohio.).—Extract or essence of musk may be prepared by digesting 1 oz. of best Tonquin grain-musk in ½ pint of boiling distilled water in a closed vessel, with frequent agitation when cold; add 3½ pints of 95 per cent alcohol, ½ fl. oz. of water of ammonia, and having securely corked or stoppered the vessel, digest the whole for 1–2 months with frequent agitation, in a room exposed to the sun in summer, or in an equally warm place in winter. Lastly, after repose, decant the clear portion, and, if necessary, filter it. A little essence of ambergris is usually added to the filtrate, or, when this is not done, 1–2 drachms of ambergris are put into the vessel before closing it, and after adding the spirit.

Trade Marks of French Glass. (W. H. W., N. Y.).—The letters in our price lists, page 8, qualifying the various kinds of Single and Double Glass, are the initials of the firm of E. T. Holbrook, Beekman St., N. Y.

Orange Peel (M. D., Boston, Mass.; W., New York, and J. S. D., Columbus, O.).—Your inquiry about sweet and bitter orange peel is the third within this week which has reached us. Sweet orange peel is not imported into this country. What is known in the trade in our market as *sweet* orange peel generally is the rind of the *ripe bitter* or Seville orange. The term Curaçao orange peel is applied either to the rind of the unripe fruit of the bitter or Seville orange, or also to the rind of a peculiar variety of orange growing in the West Indies, being of a lesser thickness than the other, and having an exterior dark dirty-green color.

Gelatine-Coated Pills (H. S. K. pro W., Asbury Park, N. J.).—There are various ways of coating pills with gelatine, some of them being patented. The original French method was this: Dissolve equal parts of gelatine and jujube paste in sufficient water to form a liquid of the thickness of molasses. Skim off the skin which is constantly forming on the surface with a spatula, and dip into it (with the other hand) the pill previously fixed on the point of a wire or needle; turn it in the air a few seconds, and push the other end of the needle into sand, to give it an upright support. By having a large number of needles, you may coat as many pills as you desire.—Compare also Parrish's *Pharmacy*.

Turlington's Balsam (T. J. R., Kalamazoo, Mich.)—You say that this liquid, when applied to a fresh cut, turns the blood white and coagulates it. This is not exactly the case. The probable reaction is, that the watery portion of the blood precipitates the resins contained in the alcoholic tincture as a whitish-looking mass, which itself gives to the wound the appearance of gelatinization. The alcohol of the tincture naturally has an additional effect. Your inquiry as to what might be the cause of a failure of this appearance, is rather difficult to answer; most likely it is owing to a defective strength of the tincture, both in alcohol and in resinous ingredients.

Extract of Eucalyptus as a Local Anæsthetic.—It is stated that one drop of the extract of eucalyptus, applied on cotton to sensitive dentine just before excavating, serves as the best local anæsthetic.

PRESCRIPTIONS AND FORMULÆ.

Analyses of Patent and Secret Remedies.

THE following analyses are from the same source as those given on page 291 of our last volume, and are republished from the *Chemist and Druggist:*

Acerbo's Anti-Rheumatic and Anti-Catarrh Oil.—For various horse diseases:—

	Parts.
Gum euphorbium	10
Absolute alcohol	10
Olive oil	80

Digest in a warm water bath for 24 hours, then boil until all the spirit has evaporated, and, when cold, strain through cotton.—*Hager.*

Acetidux (Dr. Oelfer's).—Made by Döllinger, of Berlin. For the radical and painless removal of warts, corns, hard skin, etc. A solution of 5 grammes of chromic acid in 15 grammes of water.—*Schädler.*

Acetine.—An essence for the removal of corns. Concentrated vinegar (1.04 sp. gr.) slightly tinted with fuchsine.—*Hager.*

Acetine, Hochstetter's.—Prepared by J. C. F. Witte, Berlin. A remedy for corns, warts, and hard skin. Diluted vinegar, colored with blue carmine.—*Schädler.*

Ahornzucker (Genuine American Maple Sugar).—For coughs, hoarseness, and all affections of the throat and chest caused by cold. The raw maple sugar as imported.—*Hager.*

Dr. Airy's Nature's Medical Treatment is the title of a pamphlet which recommends four secret remedies against 166 diseases.

a. The Pain Expeller, a mixture of about 35 parts of the tincture of capsicum, 20 parts of diluted spirit, and 20 parts of spirit of ammonia.

b. Sarsaparillian, a fluid extract of sarsaparilla and China root, containing 1 per cent of iodide of potassium.

c. Pills composed of powdered iron, jalap resin, jalap powder, and marsh mallow powder, made into a mass with some bitter extract. Each pill weighs 0.1 gramme.

d. Calming Pastiles are thick, hard tablets composed of sugar, with oil of anise, and colored with licorice juice.—*Hager.*

Akusticon (an Ear Essence).—A proved remedy for every kind of ear disease, by Pserhofer. This may be imitated by dissolving in common glycerin one-fifth of its weight of fir tar, filtering and adding a few drops of cajeput oil dissolved in spirit.—*Hager.*

Chinese Alabaster (Shand's).—Carbonate of Lime.—*Chandler.*

Chinese Alabaster Tablets (John Swine's).—Carbonate of lime.—*Chandler.*

Albion (Parisian).—"Will preserve the skin white and free from wrinkles." An aromatic water with chloride of lead and calomel suspended in it.—*Landerer.*

Albolith.—A cement powder prepared by W. Reiman, Breslau. Made with calcined magnesia (obtained from magnesite), and chlorite of magnesium. It is recommended for painting walls, stairs and wooden articles.—*Hager.*

Algontine.—A mouth and tooth wash. An aqueous solution of nitrate of potassium, aromatized with oil of peppermint, tincture of myrrh, and tincture of cinnamon.

Algophon (Bernhard, Salzberg).—For pains in decayed teeth. A solution of ethereal oil and mustard (2 grammes) in spirit of cochlearia (30 grammes), colored green by saffron and litmus.—*Wittstein.*

Anti-Miasmaticum.—A disinfecting powder, manufactured first in Berlin, in 1866, and described as "prepared by steam." Quicklime slaked with a solution of sulphate of iron and mixed with turf ashes, also probably containing some carbolic acid.—Fluid Anti-Miasmaticum is a solution of sulphate of iron in impure acetic acid. 1,200 grammes in a bottle.—*Hager.*

Anti Rheumatic Drops (Roll, Amsterdam).—A turbid, dark-brown liquid, which consists of a solution of spirituous extract of aconite in a decoction of couch grass root, and to which some tincture of opium with saffron and oil of valerian have been added. 100 grammes.

Mrs. Hungerford's Anti-Rheumatic Salve (Wedecke, Berlin).—Recommended for acute and chronic rheumatism, gout, and nervous pains.

	Grammes.
Camphor	1
Carbolic acid	1
Simple cerate	12

—*Schädler.*

Anti-Spasmodic Syrup, for whooping-cough (Dessaga, Strassburg).—A pleasant syrup, leaving a slightly sharp taste, containing a little carbonate of potash, and faintly colored with rosaniline.—*ager.*

Antisudin, a remedy for sweaty feet (Mandowski, Annaberg).—Powdered alum, 250 grammes.—*Hager.*

Allgemeine Flusstinctur (Sulzberger, Salzungen).—For the relief of a number of diseases, among which are cholera and sea-sickness.

	Parts.
Aloes	1
Spirit of wine	2

Alpenkräuter-Brust-Teig (Grablowitz).—*Pectoral Cakes of Alpine Herbs.*

	Parts.
Gum arabic	100
Sugar	200
Extract licorice	
Saffron	

Each box contains 48 lozenge-shaped yellowish cakes, made into a mass with decoction of marsh mallow.—*Hager.*

Alpenkräuter Gesundheits-Liqueur (Rudolph Bohl).—*Medicinal Liqueur of Alpine Herbs.*—A bottle containing 350 grammes of a liqueur which is an extract of star anise, cassia, frangular bark, centaury, chicory, gentian, and a little aloes.—*Hager.*

Alpenkräuter-Magenbitter (Hauber).—*Stomachic Bitters of Alpine Herbs.*—A brown liqueur of bitter, spirituous, and slightly aromatic flavor, containing in 100 parts:—

	Parts.
Oil of anise	0.5
Oil of cloves	0.5
Aloes	1.5
Alcohol	40
Water	50

157 grammes in each bottle.—*Wittstein.*

Alpine Rose Soap, Swiss.—A preservative against syphilitic infection (G. A. Sarpe, Zurich).—A glass cylinder corked and sealed, about two inches long, and containing a hard brownish-gray mass weighing 12 grammes, prepared thus:

	Parts.
Ammonia	1
Corrosive Sublimate	3
Tannin	2
Chloride of lime	24
Castile soap	190
Oil of cloves	1
Spirit of wine, q.s.	

—*Hager.*

American Pills (A. H. Boldt, Lexington).—For full-blooded, corpulent persons, and for those of sedentary habits, for irregular menstruation and against contagious diseases. Made of scammony, rhubarb, and soap. Each box contains 72 pills.—*Schädler.*

Althoff's Water (Aqua Mirabilis), for torpid ulcers :—

	Parts.
Wine vinegar	750
Sulphate of copper	100
Potash	25
Ammonia	30
Salt of sorrel	8
French brandy	375

Digest for a few days in a glass vessel and distil to dryness from a glass retort.—*Wittstein.*

Ambrosia, King's Vegetable (Tubbs, Peterborg, U. S).—A liquid with a sediment, containing 1 per cent of lead.—*Chandler.*

Ameisen Balsam. Von Dr. Livingstone (Ahnelt, Charlottenburg).—*Balsam of ants.*

	Grammes.
Castor oil	72
Balsam of Peru	2
	Drops.
Bergamot	5

—*Hager.*

American Medicines Dr. Sampson's (New York).—Two kinds of pills of coca :—No. 1. 85 pills composed of coca extract and coca powder, and each pill containing about 0.006 gramme of a morphia salt. No. 2. 50 pills, also of coca, and each contains 0.05 gramme of powdered iron. Both kinds are rolled in lycopodium.—*Hager.*

American Drops for Toothache (Majewsky, Warsaw) have been found of various composition. Some which profess to have taken a prize at the Vienna Exhibition were composed of French brandy, containing common salt, and colored with cochineal ; 5 grammes, 1*s.* 6*d.* Others sold in St. Petersburg were three little bottles in a case. The first was a spirituous solution of an ethereal oil with some oil of cloves, colored rather reddish ; No. 2 was a similar solution with some oil of peppermint and tincture of rhatany ; and No. 3 was merely a diluted solution of No. 2.—*Hager.*

American Universal Blood Purifying Herb Tea (Dr. Kuhr), for women's diseases, hysteria, nervous debility, epilepsey, stomachic complaints, asthma, hæmorrhoids, gout, rheumatism, worms, and much besides. White horehound, marsh mallow, licorice wood, and sassafrass, of each, 10 parts ; anise, coriander and fennel, of each, 5 parts ; red poppy petals, 4 parts ; lavender flowers, 2 parts, senna, peppermint, millefoil flowers and valerian root, of each, 1 part.—*Kuhr and Selle.*

American Pills for Asthma.—Sold at Hamburg. Gilded pills made of gum ammoniac.

American Shampoo Fluid for Promoting the Growth of the Hair.—Spirit of wine and rum, with some carbonate of ammonia and potash.

Antepidemicum Universale (H. Müller, Copenhagen).—"A valuable universal remedy for all sorts of contagious diseases in man or domestic animals." A fluid like water, with a weak, almost imperceptible, odor of acetic ether. Is composed of spring water, in which perhaps two or three drops of pure carbolic acid are dissolved, and a few drops of acetic ether added to disguise it.—*Hager.*

Anthosenz (Dr. Hess, Berlin).—General tonic and anodyne balsam.

	Parts.
Oil of cloves	4
Oil of geranium	2
Pine-apple essence	1
Spirit	50

Colored with alkanet root.—*Hager.*

Anti-Cholera Acid (H. Ludwig, Vienna ; also an American preparation).—"A proved cure and preventative of cholera."

	Parts.
Diluted sulphuric acid	1
Wine	5
Water	10

—*Hager, Buchner, and Wittstein.*

Anti-Cholera Water (Eau Anticholerique de Duboc, Paris), for lead colic and a preventive of cholera.—Composed of water with some brandy and a half per cent of sulphuric acid.—*Gmelin.*

Anti-Epilepticum (Wepler, Berlin), known as Wepler's Krampfpulver.

	Parts.
Magnesia alba	5
Rad. dictamni	15
Rad. zedoar	12
Rad. artemis	8
Soot	½
Ol. valerian	½
Ol. cajeputi	¼

25 grains (1.8 gramme) in each powder, and 30 powders in each packet, each wrapped in wax paper, and an outside wrapper also, 5*s.*

Dr. Hager is the authority for the above, and he adds that formerly the same proprietor sold a remedy for 15*s.* which consisted of seven powders, and were black carbonized hempen thread.

Antipsilothron, for preventing loss of hair (Hegewald, Berlin.)—A brownish-yellow, clear, pleasant smelling liquid, which consists of a filtered extract of 2.5 grms. of nutgalls, with 50 grms. strong spirit and 30 grms. water ; perfumed with several ethereal oils. The liquid is not made turbid by dilution with water. Sold in square bottles containing about 80 grms. The directions strongly recommend the supplementary use of a Swiss "vegetable oil," which probably Switzerland has never seen.—*Hager.*

Amykos (Galen, Upsala).—A cosmetic and mouth-wash. Claims to be prepared according to an English patent. It is an aqueous extract of 420 grammes cloves, boiled in a gallon of water, in which 420 grammes of pure glycerin are dissolved, and to which 210 grammes of borax are added.—*Hager.*

Anadoli (Kreller, Nuremberg). An oriental tooth-powder.

	Parts.
Powdered soap	42
Starch powder	44
Levantine soap wort	12

Oil of bergamot and lemon to flavor.—*Wittstein.*

Anatherin Balsam (J. G. Popp, Vienna). A mouth-wash.

	Parts.
Red sandal wood	20
Guaiacum-wood	10
Myrrh	25
Cloves	15
Cinnamon	5
Oils of cloves and cinnamon, of each	⅔
Spirit, 90 per cent	1,450
Rose water	725

Digest and filter. Dr. Hager, who gives the above, says that on the expiration of the patent the following formula was published, but that a preparation made from that process had only a distant resemblance to the actual compound :—

	Parts.
Myrrh	1
Guaiacum-wood	4
Saltpetre	1

To be macerated for a night with

Corn brandy	120
Spirit of cochlearia	180

Then distil of this 240 parts, in which are to be digested for 14 days garden rue, cochlearia, rose-leaves, black mustard, horse-radish, pellitory root, cinchona bark, club-moss, sage-vetiver, and alkanet root, of each 1 part. Strain and filter, and to each 120 parts of the filtrate add 1 part of spirit of nitrous ether.—*Hager.*

Amykosaseptin is linen saturated with a hot solution of borax.—*Nystrom.*

Anosmin Foot Water (Koch), for sweaty feet. An aqueous solution of tartaric acid.

Antitropfen (Kirchner & Menge, Arsolen), for weak digestion.

	Parts.
Senna	20
Rhubarb	3
Jalap	6
Zedoary root	2
Ginger	2
Galangal	3
Soda bicarbonate	5
Sugar	15
Water	300
Spirit	65

After digestion, this is to be strained and mixed with an infusion of 30 parts of yarrow (with the flowers) in 300 parts of hot water. After standing some time filter.—*Hager.*

Anodyn (Müller, Berlin). Chiefly for rheumatic pains, toothache, etc.

	Drops.
Oil of rosemary	30
Oil of thyme	10
	Grammes.
Camphor	5
Spirit of ammonia	12
Spirit	60

—*Hager.*

Anosmin Foot Powder (Dr. Oscar Bernar, Vienna). "An unfailing remedy for sweaty feet and bad odor of the feet."

	Parts.
Powdered alum	21
Maize meal	1

Turpentine Mixture for Use in Typhoid.—In the *British Med. Jour.* Dr. Perssé White gives the experience which he has had with the employment of turpentine in cases of typhoid fever complicated with bronchitis or diarrhœa, and mentions the following formula as having furnished good results:

℞	Olei terebinthinæ	℥ ij.
	Liq. potassæ	℥ ij.
	Mucilaginis acaciæ	℥ iv.
	Syr. papaveris alb.,	
	Syr. flor. aurantii	āā ℥ viij.
	Aq. camphoræ, q. s. ad	℥ viij.

Fiat Mistura. A tablespoonful to be taken every fourth hour, the bottle being first shaken.

Dextrine Mucilage.—As an adhesive, dextrine is superior to gum-arabic in many instances; it is used on the backs of postage and revenue stamps, and to fasten envelopes. As a means for affixing labels to glass it is excellent.

Dextrine	2 ounces.
Acetic acid	1 ounce.
Water	5 ounces.
Alcohol	1 ounce.

The dextrine should be dissolved in the water and acid by means of a water-bath, and the alcohol added afterwards.

Another formula gives the following proportions:

Dextrine	2 ounces.
Acetic acid	½ ounce.
Water	4½ ounces.
Alcohol	½ ounce.

Mix the dextrine, acetic acid and water, stirring until they are thoroughly mixed, then add the alcohol.

Correction.—The formula of Dr. Brown-Séquard's, for use in epilepsy, published on page 28 of our January number, should have read as follows:

℞ Sodii bromidi,
Potassii bromidi,
Ammonii bromidi āā ℥ iij.
etc., etc.

NEW PATENTS.

[*The following list is compiled from official sources, especially for* NEW REMEDIES, *by S. H. Wales & Son, Solicitors of Patents, 114 Nassau St., New York, who will furnish gratis to subscribers any information relating to this department.*

TRADE MARKS GRANTED IN NOVEMBER.

Medicinal Preparations.

5,319. Theodore Metcalf & Co., Boston, Mass. The word-symbol "Burnett." (Cod Liver Oil.)

5,323. Samuel T. Walcott, Baltimore, Md. "A shield or escutcheon, crossed by a bar dexter, bearing the motto 'Quæ nocent docent.' In the upper sinister quarter the shield is divided by a number of upright pales. In the lower quarter, on the same side, is displayed the representation of a pestle and mortar. On the dexter side of the shield, and partly hidden by the bar, is displayed the figure of a tree."

5,331. Lawson Chemical Company, Cleveland, Ohio. The facsimile of signature of "Peter Lawson."

5,335. Novelty Chemical Company, New York, N. Y. The word-symbol "Castaneine."

5,352. Morley Brothers, Austin, Texas. The pictorial representation of a horse, with an attendant holding the same.

5,385. Richardson & Co., St. Louis, Mo. The representation of the Scotch coat-of-arms.

Paints.

5,296. Gutta Percha Paint Company, Cleveland, Ohio. The figure or representation of a frog.

5,326. Anchor White Lead Company, Cincinnati, Ohio. The term or designation "Anchor," whether employed in the form of a word or of a figure, or both.

5,361. Whittier Fuller & Co., San Francisco, Cal. The word-symbol "Pioneer."

Cosmetics, Soaps and Perfumes.

5,293. Day & Frick, Philadelphia, Pa. The symbol of a pair of scales. (Soap.)

5,303. Myron Albert Corman, Canandaigua, N. Y. The pictorial representation of a child in short morning dress in the act of cleaning his teeth. (Dentifrice.)

5,310. The Allen Hay Company, New York, N. Y. The arbitrarily selected words "Army and Navy." (Soap.)

5,311. The Allen Hay Company, New York, N. Y. The word-symbol "Kaliston." (Soap.)

5,367. Charles Lubrecht, Brooklyn, N. Y. The word-symbol "Oriental." (Dentifrice.)

5,369. John J. Ralya, Indianapolis, Ind. The word-symbol "Magic Colorls."

5,382. Francis A. Marsh, Syracuse, N. Y. The word-symbol "Japanola."

Miscellaneous.

5,329. Robert H. Kline, Philadelphia, Pa. The word-symbol "Sachet de Médecin." (Ring Pessaries.)

5,346. W. B. Horner, Newcastle, Pa. The representation of the rats, the scrolls with the words printed thereon, and the stone wall, as shown. (Rat Exterminator.)

5,349. Susannah Livingston, Chicago, Ill. The name "Mrs. Livingston," and the word-symbol "African." (Laundry Preparation.)

5,353. Asa L. Shipman's Sons, New York, N. Y. The word-symbol "Stickaline." (Adhesive Paste.)

LABELS GRANTED DURING NOVEMBER.

1,229. "Dr. Galvin's Celebrated Croup Tincture." Jas. W. Garney & Co., Scranton, Pa.

1,230. "T. H. Kennedy's Pirus Canadensis Ointment." Charles F. Goodman, Omaha, Neb.

1,239. "Dr. John Meagher's Wonderful Cure for Scro-

fula or King's Evil." Dr. John Meagher, Minneapolis, Minn.

1,240. "Dr. John Meagher's All Healing Salve." Dr. John Meagher, Minneapolis, Minn.

1,241. "Van Buskirk's Fragrant Sozodont." Hall & Ruckel, New York, N. Y.

1,242. "Kimm's Holland Worm Cakes." George G. Steketee, Grand Rapids, Mich.

1,243. "Kimm's Ague Cure." George G. Steketee, Grand Rapids, Mich.

1,244. "Kimm's $100 Premium Aromatic Bitters." George G. Steketee, Grand Rapids, Mich.

1,245. "Kimm's 50c. Premium Aromatic Bitters." Geo. G. Steketee, Grand Rapids, Mich.

1,251. "Gray's Celebrated Wine Bitters." J. R. Gorham, Jr., Newark, N. J.

1,252. "Kurr's Liquid Hoof Ointment." Henry H. Kurr & Co., Boston, Mass.

1,254. "Dr. Sykes' Sure Cure for Catarrh." Charles R. Sykes, Chicago, Ill.

1,255. "Trott's Horse Liniment, etc." C. H. Trott, Boston, Mass.

1,256. "Yarnall's Exterminator for Destroying Rats, Mice, Roaches, etc." Amos H. Yarnall's Sons, Phil., Pa.

1,257. "Yarnall's Unequalled Cattle Powder." A. H. Yarnall, Phil., Pa.

1,260. "Murison's Catarrh and Bronchial Cigarettes, etc." James Murison, St. Louis, Mo.

1,261. "A. Z. Ringwalt's Celebrated Hair Liquid." Adam Z. Ringwalt, Lancaster, Pa.

1,262. "Elliott's Carbolic Snuff." Wells & Elliott, New York, N. Y.

1,263. "Bucklino's Triple Extract Bouquets." Thomas B. Bailey, Milford, Mass.

1,269. "Lawson's Curative." Lawson Chemical Co., Cleveland, Ohio.

1,272. "Dr. D. D. Judson's Genuine Healing Balsam." Pembroke C. Rogers, Cortlandville, New York.

1,273. "Batticide, a Destroyer of Cockroaches and Water Bugs." Henry Thayer & Co., Cambridge, Mass.

1,274. "Dr. Dixford's Instant Pain Relief, etc." Geo. E. Kingsbury, Boston, Mass.

PATENTS GRANTED IN NOVEMBER.

November 6th.

Bath, portable vapor, G. Gordon	196,890
Bottle-stopper, J. L. Besnard	196,867
Bottle-stopper, T. Rule	196,936
Can, metallic, C. P. Maxfield	196,758
Corkscrew, N. Oak	196,761
Floating soap, A. Quentin	196,766
Inhalers, J. Lewis	196,812
Labels, making glass, P. Arbogast	196,855
Matches, preparing for dipping, P. Beer	196,864
Mineral phosphates, treatment of P. G. L. G. Designolle	196,881
Mixing plastic compounds, A. Dietz	196,882
Meats, preserving, M. Ottenheimer	196,929
Oxide of tin, I. M. Sanders	166,831
Scales, C. L. Bellamy	196,865
Sulphuric-acid, purifying and condensing, R. W. Wallace	196,957
Surgical bandages, preparing, F. Green	196,892
Trusses, L. Westinghouse	196,959

November 13th.

Amalgamating pan, G. Kustel & O. Hofmann	197,971
Artificial marble, R. P. Coughlin	106,971
Atomizers, steam, P. Rundquist & T. Angelo	197,057
Blast furnaces, I. F. Bennett	197,010
Bougies, S. St. Johns	197,060
Cans, metallic, E. T. Covell (R)	7,942
Cork-cutter, T. A. Warrington & C. Harwood	197,189
Dental impression cups, Wm. M. Reynolds	196,991
Dose measurer, G. Colmer	197,017
Faucet, J. Graham	197,117
Gas, m'f'g of illuminating, M. H. Strong	197,061, 197,062
Hydrocarbons, apparatus for testing igniting temperature of, F. B. Squire	197,197
Illuminating gas, m'f'g of, T. Tully	197,001
Nursing-bottle, L. Meyer	197,156
Pessaries, medicated ring, R. H. Kline	196,979
Scale, pendulum, H. M. Weaver	197,190
Syringe, enema, F. B. Richardson (R)	7,946
Tap for barrel, I. H. Burns	197,013
Thermo-electric pile, C. Wray & L. Wray, Jr	197,196
Transferring molten metals, T. Steitz	196,997
Trusses, B. T. Nichols	197,050
Trusses, I. H. Corwin	197,104
Trusses, R. R. Jones	197,142

November 20th.

Bath, vapor, I. W. Buell	197,327
Calcimining materials, putting up, I. F. Walter, Jr	197,433
Chin adjuster, T. Boylston	197,243
Cocks for air compressors, W. D. Seal	197,414
Crucibles, m'f'g of plumbago, T. C. Cline	197,335
Corkscrew, J. E. Baum	197,201
Dental pluggers, I. R. Finney	197,261
Dentists' chairs, B. M. Wilkerson	197,441
Faucet, W. F. Class	167,249
Gas, m'f'g of illuminating, I. Herzog	197,366
" " " W. Smith	197,420
Head rests for chairs, T. Leisure	197,382
Ice-machine, E. Krost	197,223
Mash, preparation of, A. Schwarz	197,413
Pans for boiling sap, O. B. Huggins	197,373
Rectifying apparatus, B. T. Hobsen	197,368
" " T. H. Theirman	197,428
Stopper-fastener, W. North	167,396
Trusses, J. McShary	197,386

November 27th.

Clarifying malt liquors, compound for, H. Jünemann	197,640
Cupola furnaces, V. Collian	197,605
Faucet, beer, O. H. Lawson	197,556
Faucet, beer, F. C. Lellis	197,557
Filtering medium, E. T. Blackheath & J. Robey	197,637
Filters, A. Gorham	197,627
Hydrocarbon burner, G. W. Coleman	197,004
Invalid chair, T. E. Pitcher	197,491
Scales, platform, C. Onslow	197,489
Scales, spring, M. S. Drake	167,618
Stocking-supporter, J. D. Banfield	177,587
Sulphurous acid, m'f'g of, W. D. Jones	197,474
Sulphuretted hydrogen, composition for producing, C. R. Stuntz	197,574
Syringe, flexible, M. Matteson (R)	7,971
Trusses, hernia, J. C. Ward	197,506
Truss, N. James	197,639
Vaccine matter, prepared, W. C. Cutter	197,612

Cough Mixture for Phthisis.—

℞. Morph. sulph ..... gr. iv.
Acidi hydrocyanici dil ..... gtt. lxiv.
Syrupi Pruni Virgin ..... ℥ iv.

Ft. Sol. Put in a dark and well-stoppered bottle.
Dose—Teaspoonful as often as cough demands.

Diuretic.—

℞. Spiriti ætheris nitrosi ..... ℥ j.
Ol. juniperis ..... gtt. viij.

M. S. Teaspoonful in half-glass of water frequently.

Hair Tonic.—

℞. Quiniæ sulph ..... gr. xx.
Tinct. cantharid ..... ℥ j.
Acidi sulphurosi ..... ℥ ij.
Cocoaine (Burnett's) ..... ℥ viij.

Ft. Sol. S. Rub into scalp daily.

ITEMS.

New York Therapeutical Society.—A stated meeting of the Therapeutical Society was held at the rooms of the New York Academy of Medicine, on the 8th inst. The Committee on Neurotics (Dr. E. C. Seguin, *Chairman*) reported on the results of the use of potassium chloride in epilepsy; that in the cases in private practice, college clinics, and in the Hospital for Epileptics and Paralytics, where it had been tried after observing the effects of potassium bromide and placebos, it had appeared to be practically valueless in doses of 8 grains 3 times a day and 24 grains at bed-time.

The following synopsis of the tables reported shows the comparative influence of these remedies, and no treatment at all:

6 Males	3 months	with	placebos,	170 convulsions.
	3 "	"	pot. bromide,	51 "
8 Females	1 month	"	placebos,	149 "
	1 "	"	pot. bromide,	43 "
3 Males	1 "	"	pot. chloride	115 "
	1 "	"	pot. bromide	22 "
18 Females	1 "	"	pot. chloride	410 "
	1 "	"	pot. bromide	285 "

The Committee also made a preliminary report on the use of a mixture of bromides and chloral in epilepsy, the following formula having been used in most instances:

℞ Potassii Bromidi..... ℥i.
Chloral hydratis..... ʒss.
Aquæ..... fl. ℥vij. M.
Teaspoonful doses three times daily.

The committee based their conclusions upon reports from the following-named gentlemen: Dr. A. McL. Hamilton 13 cases), Dr. McBride (4 cases), J. H. Emerson (2 cases), Dr. Shaw, of Brooklyn (6 or 8 cases), Dr. E. Seguin (2 cases). The reporters were united in the opinion that this combination enabled them to dispense with about two-thirds of the quantity of potassium bromide that had been required to produce an arrest of the paroxysm; that the intervals were longer, the attacks diminished in severity, and the accidents of bromism, to a great extent, avoided. The patients became more cheerful and lively, and presented in every way a better condition than when under treatment by the bromide alone. A discussion followed, in which Dr. E. R. Squibb, Wm. M. Thomson, E. C. Seguin, Hanks, and Castle participated. The former gave his experience in the treatment of four cases of epilepsy. He had yet to hear of any case in which an explosion of *grand-mal* had occurred while the patient was in a condition of bromism. In his cases the accidents of bromism had been avoided by giving the medicines in rapidly increasing doses until decided bromism had been produced, when it was suspended altogether for a few days, to be given again in the same manner, and again suspended on the accession of bromism. Dr. Seguin could not think that it would ever be proper to omit the use of the bromide for a single dose, and Dr. Thomson said he insisted upon his patients making up their minds to continue the use of bromide uninterruptedly for at least 18 months, or it would be useless to attempt the treatment at all. Drs. Hanks and Castle had employed a mixture of potassium bromide and chloral in other affections of the nervous system besides epilepsy, with the experience that the combination was more effective than a corresponding quantity of either remedy would have been.

After the transaction of the regular business, Dr. Henry G. Piffard presented a preparation of muriate of pilocarpia triturated with milk sugar, so that administration in proper doses would be rendered easier; the necessity for hypodermic injection avoided, and the consequent liability of the remedy to deterioration when held in solution in water avoided.

Dr. Squibb mentions that an exceedingly small quantity of salicylic acid added to a solution would prevent the formation of the vegetable growth which led to the loss of the alkaloid.

Dr. Piffard next exhibited a preparation of opium called by him "Pulvis Opii saccharata," in which milk-sugar took the place of the potassium sulphate in ordinary Dover's Powder; also a variety of flaxseed, known as "Calcutta linseed," which contained at least 30 per cent of oil, and had been extensively used in place of cod-liver oil; the patient chewing and swallowing 3 to 4 ounces in the course of the day. A trial of it showed that its taste was not at all disagreeable.

Literary and Scientific Society of the German Apothecaries of New York.—At the annual election of this society, held on Jan. 10th, the following officers were chosen: *President:* Paul Balluff. *Vice-Presidents:* Gust. Pfingsten, Paul Lehlbach. *Recording Secretary:* Ludw. G. W. Ruprecht. *Corresp. Secretary:* J. B. Fürstenwärther. *Treasurer:* Theod. Louis. *Archivist:* Gust. Balser. *Librarian:* Paul Balluff. *Directors:* Gust. Ramsperger, Conr. Ihlefeld, Adolph Tscheppe. *Scientific Committee:* Ad. Tscheppe, Dr. Mettenheimer, Ern. Reusch, Rud. Zahn, Carl Schleussner. *Business Committee:* Gust. Pfingsten, F. A. Reichardt, Theod. Louis. *Entertainment Committee:* Messrs. Bischoff, Lehlbach, Kessler, Zahn, Fürstenwärther. *Delegates to the Amer. Pharm. Assoc.:* Chas. Eimer, P. Balluff, F. A. Reichardt, Ad. Tscheppe, Dr. Menninger.

Decisions of the Treasury Department.

3,405.—*Candles made of Wax, Duty on:*—That certain candles made of ceresine (ozokerit) should pay a duty of 8 cents per pound, and not 2½ cents per pound, as claimed by the importers, the opinion of the department being, that the provision for wax candles embraces candles made of any kind of wax, and is not limited to those made of beeswax.

3,410.—*Crude Oxide of Manganese, Duty on:*—A so-called oxide of manganese in the form of a white powder, differing, both in appearance (all the oxides of manganese being black or colored) and composition, from the said oxides, was assessed a duty of 20 per cent ad valorem (instead of free as claimed by importers), according to provisions of schedule M, for mineral substances in a crude state not otherwise provided for.

3,412.—*Extract of Chestnut not Pyrogallic Acid:*—Claimed by importer to be free as an acid used for chemical and manufacturing purposes, not otherwise provided for. Report of special appraiser decides that it is not the pyrogallic acid of commerce, but an article used in dyeing known as "extract of chestnut," and is dutiable under the provision of the tariff for "logwood and other dye woods, extracts and decoctions, at 10 per cent."

3,416.—*Cod-Liver Oil in Bottles, Imported from Canada—Duty on:*—Being put up in bottles and labelled as a medicinal preparation, removes it from the scope of the "Treaty of Washington" which provides for the admission duty free of fish-oil, the product of the Dominion of Canada and Prince Edward's Island, and it is therefore assessed a duty of 40 per cent ad valorem.

3,433.—*Cod-Liver Oil, Product of Canadian Fisheries:*—Cod-liver oil, in a purified and refined condition suitable for and intended to be used as medicine, was not the "fish-oil" referred to in the "Treaty of Washington," whether imported in casks, barrels, or otherwise, and is therefore subject to duty.—*Internal Rev. Record.*

British Exhibitors at the Paris Exhibition.—The London *Gazette* of Dec. 18th publishes a full list of the British Exhibitors at Paris this year, from which it appears that 299 firms and manufac urers of chemical, pharmaceutical, medical, and hygienic material will be represented. *The Chemist and Druggist* of Jan. 15th publishes this portion of the list.

Cork Trees at Sonoma, California, from seed twenty years ago, are now twenty-five feet high, while sheets of cork an inch and a quarter thick were taken off last year. It will not stand the winter even in our Middle States.

The New Tariff Bill, prepared by the Congressional Committee of Ways and Means, contains the following items of interest to the Drug Trade :

SCHEDULE A.—Bottles of glass or of earthenware containing any liquid or substance which pays a duty—free. Amylic alcohol, $2 per gal.*

SCHEDULE I.—Pimento, black, white, red or Cayenne pepper and cloves, 10 c. per lb † Ground pimento and ground pepper of all kinds, cassia and cassia vera, 15 c. per lb,§ Cinnamon, mace, nutmegs, cassia-buds† and ground cassia,§ and all other spices not otherwise specified, 25 c. per lb. Ground or prepared spices, 35 c. per lb.§ Clove stems† and ground ginger,§ 5 c. per lb. Ginger, preserved or pickled, and essence of ginger, 35 per cent ad val.§

SCHEDULE K.—Casks and barrels empty, sugar-box shooks, and packing boxes of wood, not otherwise provided for, 25 per cent ad val.

SCHEDULE M.—Argols, 6 c. per lb ; crude, 3 c. per lb. Books, periodicals, pamphlets, blank-books, bound or unbound, and all printed matter, engravings, bound or unbound, illustrated books and papers, maps and charts, 20 per cent ad val. Brimstone in rolls or refined, $10 per ton ; crude, $3 per ton. Chicory root, ground or unground, 1 c. per lb ; burnt or prepared, 5 c. per lb. Corks and cork bark, 30 p. c. ad val. Cream tartar, 9 c. per lb. Essences, extracts, toilet waters, cosmetics, hair-oils, pomades, hair-dressings, hair-restoratives, hair-dyes, tooth-washes, dentrifrice, tooth-pastes, aromatic cachous, or other perfumeries or cosmetics, by whatsoever name or names known, used or applied as perfumes, or applications to the hair, mouth, or skin, Cologne-water, or other perfumery, of which alcohol forms the principal ingredient, rum-essence or oil, and bay-rum essence or oil, 50 p. c. ad val. Figs, 3 c. per lb. Gelatine, and all similar preparations not otherwise provided for, 35 p. c. ad val. Glycerine, manufactured, of gravity over 28.5° B., 4 c. per lb ; crude, brown or yellow, of the gravity of 28.5° B., or less, 1 c. per lb. Hops, 5 c. per lb. Lemon or lime juice, 10 p. c. ad val. Licorice paste, or licorice in rolls, 5 c. per lb ; licorice juice, 3 c. per lb Linseed or flax seed, 15 c. per bush. of 56 lbs. Saltpeter, crude, refined, or partly refined, 2 c. per lb. Soap, fancy, perfumed, honey, transparent, and all descriptions of toilet and shaving soaps, 15 c. per lb ; opium, $2 per lb ; prepared for smoking and all other preparations of opium, not otherwise provided for, $8 per lb. But opium deposited in bonded warehouses shall not be removed therefrom for exportation without payment of duties, and such duties shall not be refunded. Paints and dyes, aniline dyes and colors, by whatever names known, 50 p. c. ad val. Lead, white or red, and litharge, dry or ground in oil 3 c. per lb. Ultramarine, 6 c. per lb. All other paints or painters' colors, oil or water, and dyes, not herein otherwise provided for, 20 p. c. ad val. Camphor, crude, 3 c. per lb. Sumac, 10 p. c. ad val. Potash, bichromate of, 4 c. per lb ; chlorate and chromate of, 3c. per lb ; hydriodate, iodate, iodide of, 75 c. per lb ; acetate of, 25 c. per lb ; prussiate, yellow, 50 c. per lb ; prussiate, red, 10 c. per lb ; bicarbonate or saleratus and potash, 1½ c. per lb. Soda, caustic and bicarbonate, 1½ c. per lb ; soda ash and carbonate, under whatever name designated, 20 p. c. ad val. Mustard, ground and in bulk, 5 c. per lb ; when inclosed in glass or tin, or any other metallic or other substance, 10 c. per lb. Nuts of all kinds, not otherwise provided for, 3 c. per lb. Oil, olive, $1 per gall.; linseed or flaxseed, 15 c. per gall.; 7½ lbs weight to be estimated as a gall. Oils, essential or essence : lemon, 50 c. per lb ; orange, 50 c. per lb ; and all other essential oils, not otherwise provided for, 50 p. c. ad val. Sponges, 20 p. c. ad val. Sulphur, flowers of, $20 per ton. Varnish, valued at a $1.50 or less per gall., 40 c. per gall.; valued at above $1.50 per gall., 50 c. per gall. Vitriol, white, or sulphate of zinc, 20 p. c. ad val.; blue or sulphate of copper, 2 c. per lb. Barks : Quilla, Peruvian, Lima, Calisaya, Cinchona barks, canella alba, pomegranate, croton, cascarilla, and all other barks not otherwise provided for, 10 p. c. ad val. Cochineal, 50 p. c. ad val. Ginger root, 10 p. c. ad val. Gum shellac, 5 c. per lb. Gums : Arabic, Jeddo, Senegal, Barbary, East India, Cape, Australia, gum benzoin or benjamin, gum copal, sandarac, dammar, gamboge, courie, mastic, tragacanth, olibanum, guaiac, myrrh, bdellium, albanum, and all gums not otherwise provided for, 10 p. c. ad val. Indigo, and extract of indigo, 10 p. c. ad val. Oil, essential, fixed or expressed, almond, amber, crude and rectified, ambergris, anise or anise-seed, anther or rosemary, bergamot, cajeput, caraway, cassia, cedrat, chamomile, cinnamon, citronella or lemon-grass, civet, fennel, jasmine or jessamine, juglandium, juniper, lavender, mace, ottar of roses, poppy, sessame or sessamon-seed, or bene, thyme, red or origanum, white, valerian, 10 p. c. ad val. Orange and lemon peel, not prepared, 20 p. c. ad val.; candied or otherwise prepared, 20 p. c. ad val. Quinia, salts of, other than sulphate of, 20 p. c. ad val.; sulphate of, 10 p. c. ad val. Sarsaparilla, crude, 20 p. c. ad val. Seeds : anise, anise star, Chia, caraway, sesamum ; sugar-cane, and seeds of forest trees, 20 p. c. ad val. Tamarinds, 20 p. c. ad val. Tonquin, Tonqua, or Tonka beans, 20 p. c. ad val. Vanilla-beans, $1.50 per lb ; vanilla-plants, 50 c. per lb. Verdigris, or sub-acetate of copper, 10 p. c. ad val.

Production of Oxygen by a New Method.—According to a Belgian photographic journal, Herr Zinno has discovered a new way of preparing oxygen in large quantities. Baric peroxide and potassic permanganate are placed in water and allowed to act upon one another, the result being that 200 cubic centimetres of oxygen are evolved from every gramme of the mixed substances.

To test Soaps, dissolve twenty parts in water, and mix with five parts of diluted sulphuric acid. The fat rises to the top, and the mineral impurities fall to the bottom. In this manner, says a scientific contemporary, the most flagrant adulterations can be detected.

Prizes are offered by the city of Munich for a design for a monument to Liebig. The first is $400, the second $300. Models, which should not exceed with pedestal three feet in height, will be transported to Munich free by the Commission, and must be submitted between June 1st and 15th next.

Dr. W. Handsel Griffiths, of Dublin, who died on the 16th of November of typhoid fever, was a man of untiring industry and courtesy. He acted as Librarian to the College of Surgeons, lectured on chemistry in the Ledwich School of Medicine, and worked incessantly at chemical and therapeutical subjects. He was hardly in his thirtieth year, but already had made a name for himself. The deceased was a corresponding member of the Therapeutical Society of Paris, and was the author of "Notes on the Pharmacopœial Preparations," "Po-ological Tables," "Chemistry in its Relation to Therapeutics," etc.; he also edited the Monthly Reports on the Progress of Therapeutics for the *Edinburgh Medical Journal.*

Mr. Edwin Sapper has been appointed to succeed the late Dr. Handsel Griffiths as Lecturer on Chemistry in the Ledwich School of Medicine.

Dr. T. A. G. Balfour has been elected President of the Edinburgh Botanical Society.

Dr. L. P. Yandel, Jr., of Louisville, has joined the editorial staff of the *Louisville Medical News,* vice DR. GALT, who has retired. Dr. Yandel is well known as a ready and able writer and skilful physician. R. O. Cowling continues to be the senior editor. The *News* is one of the most readable and ably conducted journals which it is our pleasure to receive, and it has our cordial wishes for its continued prosperity.

To Render Oils Colorless.—Shake 1 kilogram of the oil with a solution of 8 grammes potassium permanganate in 600 grammes of water ; then add 30 grammes of hydrochloric acid (spec. gr. 1150), and shake again briskly. Decant and remove the acid by repeated washing with boiling water. Should the oil be still turbid, this may be remedied by agitating it with 5 per cent of anhydrous sodium sulphate. Rape-seed, olive, sesame, linseed, and other oils may in this manner be rendered completely colorless.